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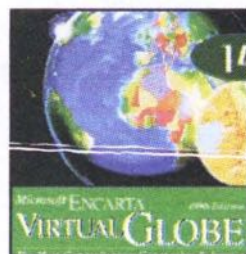


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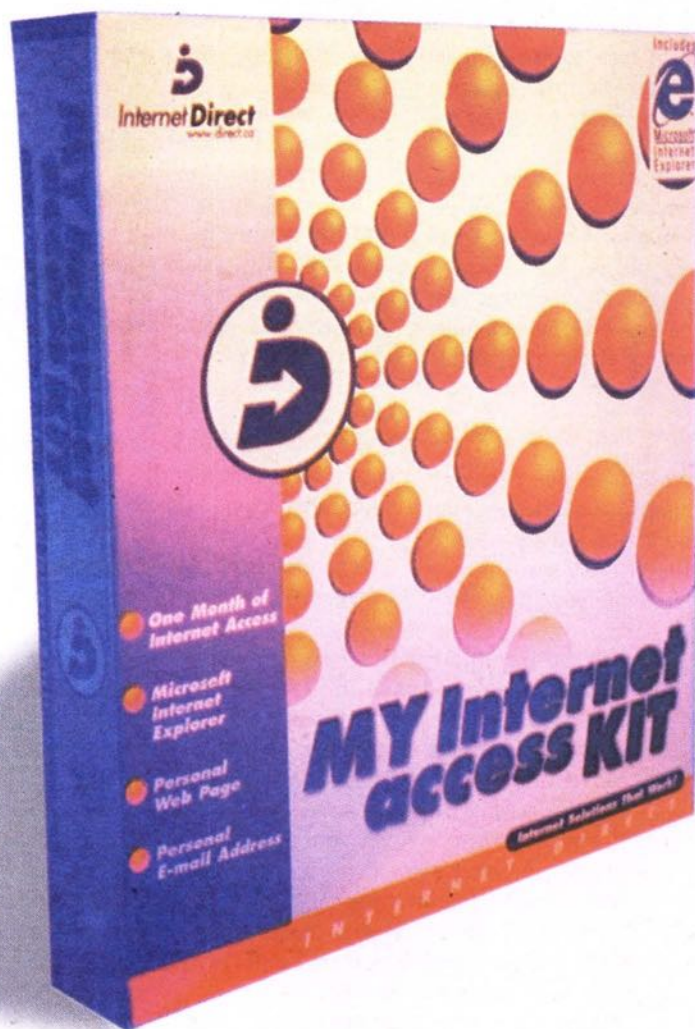


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## ABOUT THE COVER

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<http://www.computer-player.com/>

# 'Twas the month before Christmas...

## letter from the editor



...And in an effort to hasten the annual  
 purging-of-the-pocketbook, the editorial  
 elves at *Computer Player!* have  
 devoted this issue to helping you spend your  
 hard-earned money this holiday season.

Caryn Mladen kicks the issue off (see page 11)  
 with tips to help Santa buy just the right comput-  
 er and peripherals, so he doesn't have to wade  
 through the Boxing Day sale crowds for a missing cable, driver, or the  
 right software—he has had a hard night, after all.

And as this really is a kid-oriented holiday, Sandra Mingail looks at  
 some of best multimedia software available for the younger crowd  
 (see page 14).

For the kid in all of us, we look long and hard at the newest games  
 and improved versions of some old favorites; Peter Walpole is still  
 coming down from playing Flight Simulator 98 (see page 18); team  
 Zisman reviews one new and one updated NHL game (see page 20);  
 and game guru Marc Saltzman rates the best computer games of the  
 year in all categories (see page 26).

To take advantage of the features of these extraordinary new games,  
 you will, of course, want to purchase a new system with all the bells  
 and whistles. We look at two PCs in the \$5,000 range, as well as some  
 "high-end" ideas for Mac lovers (see pages 12 and 13).

If the thought of heading into the shopping mall again this year  
 jump starts your facial tick, join June Campbell on a virtual shopping  
 spree and find out about the wealth of interesting gift ideas available  
 online (see page 17).

## Nothing left to give?

If the words of our writer's have helped you drain your financial  
 resources and you'd still like to do something for your fellow man  
 and/or woman, consider donating your old hardware and software to  
 one of the many charities that refurbish and recycle old systems.

Big Brothers is one of these organizations. In September, they came

to my door and rescued my long-ignored but functional 286 and dot-  
 matrix printer. Big Brothers' Renew Crew can be reached at 604-521-  
 4393.

Computers for Schools (CFS)—sponsored by Industry Canada and  
 Telephone Pioneers—is another group of volunteers that finds new life  
 for surplus systems and software in elementary and secondary  
 schools, and libraries.

What can these old systems possibly do?

According to CFS, a 286 can run word processing applications such  
 as WordPerfect 5.1 or Word 2.0 for DOS, spreadsheet applications such  
 as Lotus 1-2-3 for DOS, and graphics application packages such as  
 Harvard Graphics 2.1 or 2.3. And a 386 is sufficient to run graphical  
 Windows versions of these same programs.

Information on CFS is available online via the SchoolNet Web site  
 at <http://www.schoolnet.ca>. (SchoolNet's FTP site also contains sev-  
 eral thousand programs that are suitable for these older  
 machines.)

If you would like to get involved with CFS, donate hardware or soft-  
 ware, or find out how to apply for computers for your school or library,  
 call 800-268-6608.

## And the winner is...

Last month we asked readers to tell us what they loved or hated  
 about the Internet in 100 words for a chance to win a Canadian  
 Geographic CD-ROM. We had lots of interesting responses, and the  
 winning letter is on page 10.

## Cheers!

May this holiday season find you home from the mall early enough to  
 raise a glass with friends and family. Have a very merry Christmas, and  
 happy Hanukkah!

Megan Johnston, Associate Editor  
 meganj@tcp.ca

## Your letters please

Letters on issues raised in  
 the paper or general com-  
 puter topics are welcome.  
 Please be brief. We regret  
 that we are unable to look  
 up stories from past issues,  
 suggest products, or solve  
 all your computer problems.  
 Only those with names  
 and e-mail or snail-mail  
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 Letters may be edited for  
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## Complaints, complaints, complaints...

I agree with almost everything in the article  
 ["Complain, complain, complain" by Caryn  
 Mladen, in the November issue of *CPI*], with  
 the exception of what she says about newbies  
 and lost emails. Most of the times the prob-  
 lem is a wrong address, but that can happen  
 to anybody, not just to "newbies." (How much  
 time do you have to spend online to stop  
 being a newbie?) And sometimes, even if you  
 type the correct address, emails get lost.

But the real reason I am writing this is the arti-  
 cle by David Rosen ["Reason to complain, com-  
 plain, complain"]. What's wrong with your life?  
 The Internet is as unreliable as the (snail) mail  
 system, but it gives you 1,000 percent more.

The information on the Web *IS* great. Where  
 else can the people speak freely about any-  
 thing they want? And that doesn't mean that  
 all that information is junk. With a little bit of

work (no pain, no gain) you can find almost  
 everything you need. And the fact that you  
 don't need a degree or a diploma to put the  
 information online is even better.

Advertising on the Internet is not as bad as  
 the article says. It's just like advertising on the  
 TV, but in TV it makes you loose more time  
 because you have to wait for it to finish in  
 order to watch your favorite program. .... And  
 if you don't like receiving those "funny"  
 emails, then you should be more careful when  
 giving away you email address. ...

Maybe it's a little expensive to get on the  
 Net. But if you want to watch TV, you have to  
 buy a TV set; if you want to listen to the radio,  
 you have to buy a radio. It just happens to be  
 that a computer is a little more expensive.  
 That's why some companies are releasing new  
 products that will let you get online cheaper.

If your ISP [Internet service provider] does-  
 n't give you the software you need to get on  
 the Net, then change your ISP. If their service  
 is bad, they don't deserve your money. ...I  
 think that's all I have to say for now.

BTW, except for all the above, I really like  
 the magazine.

Ianiv Schweber, Vancouver

## ... and a few more complaints

In your November 1997 issue of *CPI*, Caryn  
 Mladen and David Rosen had it out with the  
 Internet and were discussing how frustrating  
 the mighty Net can be to the average user.  
 And, yes, it's quite difficult to manage some  
 of the struggles and strains that were brought  
 to us. ... I've been using the Internet for  
 research and development for about four  
 years now. Most of the population has been

using it for no more than two years. I've seen  
 the incremental jump in bandwidth clog due  
 to the incredible information content within  
 the lines of the ISPs. For example, I could  
 transfer at about 150Kbps with a T1. And  
 nowadays, if the transfer rate jumps above  
 50Kbps, I'm ecstatic!

The other issue that kinda grinded against  
 me was the price thing David mentioned. No,  
 the Internet is not expensive if you know what  
 to get. ... I use a \$1,500 piece of equipment  
 (worth less these days) ... and a \$20 per  
 month ISP account. A friend uses a system  
 that cost no more than \$250 to build, a ter-  
 minal program called "Telix" and a \$25 per  
 year account at Vancouver CommunityNet.  
 Another friend uses a system that costs no  
 more than \$20 to build and, again, a \$25 per  
 year account at Vancouver CommunityNet.  
 Sure, they have to download the graphics if  
 they want to see them. But they don't need  
 graphics. And I can quite easily turn graphical  
 displays off in Netscape. So is price really an  
 issue? Only if you like those pretty graphics.

The Internet is largely a resource and a tool.  
 There's information available that, as pointed  
 out by Caryn, would be difficult to retrieve  
 without the Internet. I have access to giga-  
 bytes worth of programming information,  
 technical documents and nifty Area 51 tech-  
 nology reports that I simply couldn't have  
 dreamed of years ago. ... It's slow, it's bulky,  
 and it's beautiful. Complain about it and you  
 won't get anywhere. Learn to use it, and it'll  
 open up to you like nothing else.

Nikolas Trevor, via the Internet

continued on page 8



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Pentium 233 MMX \$1559  
K6 MMX 166/200 \$1139/1199

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Built-in DVD Support  
24X MAX Speed CD-ROM  
Sound Blaster 16 Sound Card  
2 Amplified Speakers  
95 Keyboard & Mouse  
Acer 33.6 Voice Fax/Data Modem  
ATI 3D Expression Plus 2MB Video  
15" NI, LR SVGA Monitor

266/300 Mhz \$2199/2499

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K6 MMX 200 \$1889

ASUS TX97 MB w/ MMX  
(ASUS P2L97X LX Pentium-II MB w/ AGP)  
512K Pipeline Cache  
32MB SDRAM - 10ns  
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Panasonic 1.44 Floppy  
ATI 3D Xpression Plus 2M SVGA  
Panasonic 24X CDROM  
2 Amplified Speakers  
Windows 95 Keyboard & Mouse  
SoundBlaster AWE64 PnP  
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ASUS TX97/97-E TX 512K.....\$205  
ASUS TX97-X/XE ATX 512K.....\$218  
FIC VA502 512K Ultra/IDE/SD.....\$169  
FIC PA2007 Apollo-2 1M Cache.....\$189  
Gigabyte TX2/TX3/ATX TX.....\$179/\$189  
Microstar TX2 512K.....\$169  
Shuttle 565/569 TX 512K.....\$149/\$159  
Tyan Tomcat III Dual P5/MMX.....\$299  
Tyan S1668/1662 Dual Pro.....\$385/\$399  
Acer AX6L Pentium II LX MB.....\$289  
ASUS KN97X Pentium II MB.....\$289  
ASUS P2L97 Pentium II LX MB.....\$259  
ASUS P2L97D Dual P-II LX MB.....\$419

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Pentium 150/166/200.....\$149/179/299  
Pentium 166/200 MMX.....\$199/299  
Pentium 233 MMX.....\$409  
Cyrix 6x86MX (M2) 166/200.....\$119/169  
AMD K6 166/200/233.....\$179/239/449  
Pentium II-233/266/300.....\$589/749/call  
8 / 16 / 32 M EDO 60ns.....\$31 / 49 / 109  
32 / 64M SDRAM.....\$119 / 269  
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Fujitsu 8725/4725 KB.....\$29/59  
Liteon Natural KB Touchpad.....\$85  
Microsoft Natural KB.....\$85  
Mitsumi PS/2 Bus Mouse.....\$25  
Logitech 3B MouseMan.....\$35  
Power Protection  
APC UPS 280/450.....\$145/249  
UPS 600/Smart 420.....\$329/359  
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19/25" ATX Case w/ PS.....\$99/129  
Super IDE I/O Card.....\$30  
Removable Hard Disk Rack.....\$22

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Diamond Fireport 40UW.....\$239  
Adaptec 2940U Ultra SCSI.....\$259  
Adaptec 2940 UW (Kit).....\$329  
Ethernet ISA/PCI combo.....\$29/34  
3Com 905TX PCI 10/100 BT.....\$95  
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Partition Magic ver 3.0.....\$85

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Maxtor 2.5/3.2G Ultra.....\$229/249  
Maxtor 4.3/5.2G Ultra.....\$349/419  
Maxtor 7.0/8.0G Ultra.....\$499/599  
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WD 3.1/4.3/5.1G.....\$289/369/479  
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SG Cheetah 4.5G 10K rpm.....\$969  
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LS120MB Flopy/Disk.....\$169/22  
IOmega Zip100 IDE.....\$149  
Ditto 2G Tape Int/Ex.....\$225/269  
Acer 610+ 600dpi Scanner.....\$339  
HP ScanJet 5P/6100C.....\$379/969  
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UMAX 600P/1200S.....\$199/589

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HP 670/692/722C.....\$285/359/459  
HP 820/870/890C.....\$359/529/599  
HP OfficeJet 300/350.....\$579/619  
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Brother HL730DX 600dpi.....\$409  
Brother HL760DX 1200dpi.....\$509  
HP 6L / 6P 600dpi.....\$529/999  
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ATI 3D Pro Turbo 4/8M.....\$139/239  
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ATI All-In-Wonder 2/4M.....\$289/329  
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Matrox Millennium II 4M / 8M.....\$219/339  
Monster 3D 4M oem/retail.....\$223/249  
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KTX 15" .28 1280x1024 Digital.....\$279  
Magitronic/Sceptre 15" P531.....\$329  
SONY 15" 100SX/SF .25.....\$499/579  
NEC 15" A500/E500 .28.....\$449/529  
Acer 17" 76e/76c/78ie.....\$589/649/689  
Goldstar 17" 7D/78D .25 1600.....\$659/799  
NEC 17" A700/E700 .25 1600.....\$779/919  
Sceptre 17" P73A/P75A 1600.....\$649/699  
Samsung 17" 700S/700P 1600.....\$719/909  
SONY 17" 200SX/SF .25.....\$879/989  
Viewsonic 17" V773/775 .26.....\$699/769  
Viewsonic 17" G773/P775.....\$739/889

### Fax Modems

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## Linux

I have been a Linux user for two years, and the comments by Alan Thwaits on this remarkable operating system ("The Black Box that is Linux") are all true. It's great strengths are its program development environment (C and FORTRAN compilers, make, debugging tools, etc.); text editing; computer communications (email, ftp, rlogin, Web browsers, ppp); desktop publishing (the tex suite of programs); and access to the X Windows System. And all free!

Alan emphasized using Linux for old PCs, but it is also great for hot new PCs. For example, there is now a beta release of Linux for DEC Alpha machines. This 32-bit (64-bit for Alphas) operating system is certainly more reliable than Windows 95, and I am amazed that more PC owners don't take advantage of it. If you must have Windows 95 applications running on your computer you can arrange things so that you have the choice of booting Linux or Windows 95. The only Linux disadvantage I am aware of is the steep learning curve, but there are plenty of books (e.g., *Running Linux* by Welsh and Kaufman) to help.

Dr. Alan W. Irwin, Victoria, B.C.

## Correction

Due to an editorial error, the wrong telephone number was published for Radiant Communications in the November list of Internet service providers. The correct number is 604-257-0500. Radiant can also be reached by email at [info@radiant.net](mailto:info@radiant.net) and on the Web at <http://www.radiant.net>. We apologize for any confusion this error caused. ♦

## BC News briefs

# Vancouver's Totally Hip Software signs bundling agreement

COMPILED BY JUNE CAMPBELL

Vancouver's Totally Hip Software Inc. announced a number of revenue and distribution/OEM bundling agreements for its Web animation and graphics software. Founded in 1995, Totally Hip Software designs, develops and markets multimedia software and technology. Totally Hip is best known for the Sizzler, (multimedia player and browser plugin), and for WebPainter, its award-winning Web animation and graphics software.

Under new bundling agreements, various Totally Hip products will be bundled with Symantec's Visual Cafe, Equilibrium's DeBabelizer Pro 4.5 for Windows 95/NT, GoLive Systems Inc.'s CyberStudio 2, and IXMicro's (formerly Integrated Micro Solutions) hardware products. Digital River Inc. has signed a non-exclusive electronic software distribution agreement to facilitate the sale of Totally Hip's products through the Totally Hip Web site.

"These agreements continue to increase our installed-base of users and provide direct revenues or revenue from upgrades to our pre-

miere products," said Totally Hip chief executive officer, Randall McCallum. "We have always taken pride in our ability to create easy-to-use, award-winning software and these deals continue to demonstrate our ability to move those products into the distribution channels on a finite marketing budget." Contact: <http://www.totallyhip.com>

## Technological achievements recognized

Vancouver's Tom Calvert and Gary Birch were recognized for technological achievements at the 1997 BC Science and Technology Awards Dinner.

Calvert, of Simon Fraser University, was presented the Chairman's Award for Career Achievement. In addition to being a professor of computing science, engineering and science kinesiology, Calvert has been the creative force behind Life Forms, (a human figure animation software package used by dance choreographers and others), is president and chief executive officer of CREDO Interactive, and is currently co-leader of the TeleLearning Network of Centres of Excellence.

The 1997 Young Innovator Award went to Dr.

Gary Birch, executive director and director of research and development at the Neil Squire Foundation, a Burnaby-based national organization that assists individuals with severe physical disabilities to become more independent. Birch's team is recognized internationally for its work with robot design, computer input hardware and software design, speech recognition systems, electroencephalograph (EEG) signal processing and mechanical and electrical hardware for home or office automation.

According to Science Council's Laurie Drucker, this year's event was a huge success, attended by 850 people, the largest gathering ever of B.C. science and technology leaders. The Awards were established in 1980 by the Science Council of B.C. to recognize outstanding achievements by the province's scientists, engineers, industrial innovators and science communicators. The Science Council of B.C. is a provincial agency working to encourage innovative science and technology. Contact: <http://www.scbc.org>

continued on page 10

# Christmas: running out of Time?

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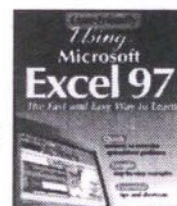
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\*See More Specials on Page 28



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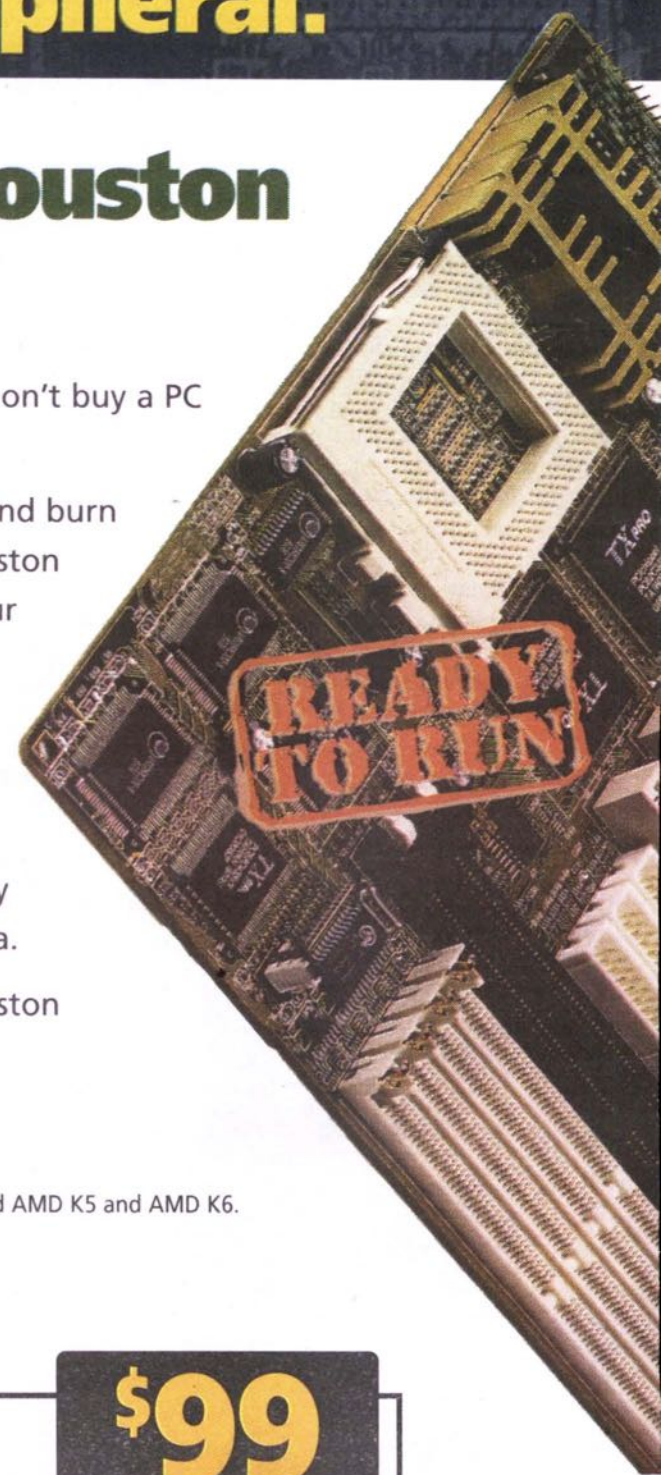
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  - AMD K6 (MMX)
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- Supports Ultra DMA hard drives and SD RAM
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Burnaby	Dexton Computer	3112 Boundry Road	604.434.3939	North Vancouver	Encore Computers	119 Lowdsdale	604.990.0547	Vancouver	ATIC	45 East Broadway	604.875.8859
Burnaby	Multitech Microsystems	6852 Merrit Avenue	604.435.5259	Prince George	Peoples Computers	1551 Ogilvy Street	250.564.5526	Vancouver	Creative Computer Sys.	102 - 1965 West 4th Avenue	604.732.6313
Burnaby	Netlink Computer	5068-B Kingsway	604.451.8682	Port Coquitlam	Sky Net Computers	101 2228 McAllister Avenue	604.942.4000	Vancouver	Intertech Office	4317 Fraser Street	604.872.7337
Comox	Panic Ventures	1596 Macvinna Avenue	250.339.0929	Port Moody	Moody Computers	2415 Clarke Street	604.931.4357	Vancouver	Microworld Computers	1239 Pacific Boulevard	604.899.1590
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Coquitlam	Advantplus Computer	#5 - 1161 The High Street	604.942.9633	Richmond	Addax Computer	21 - 12391 Bridgeport Road	604.244.0793	Vancouver	New Type Computers	1179 Pacific Boulevard	604.899.0328
Coquitlam	Elitech Systems	201 - 403 North Road	604.931.5809	Richmond	Infowave Computer	4311 Hazel Bridge Way	604.273.1368	Vancouver	Superdata Technology	1237 West Broadway	604.732.7998
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Mission	Bargain Bytes	33052A 1st Avenue	604.826.8298	Richmond	Powersonic Computers	2 - 12391 Bridgeport Road	604.214.9316	Williams Lake	IMS Computer	199N - 3rd Avenue	250.392.4675
				Sardis	MS Computech	130 Chilliwack Mall	604.858.8337				







# Giving a computer for Christmas?

## Do it right!

BY CARYN MLADEN

Thinking of picking up a new computer for Christmas? There's more involved than going to the store, plunking down your credit card, and taking the boxes home. If you want your technological addition to the family to perform on Christmas morning, you've got to think ahead. Here's a checklist of details you should deal with before that special someone unwraps the gift.

### 1. Get what everyone needs

The computer you get is a lifestyle choice so consider everyone who will use it before making the purchase. If your children use Macintosh computers at school, get a Mac. If your spouse uses a PC at her office and wants to bring work home, get a PC. If anyone wants to do high-end graphics, get a superior computer with at least 32 MB of RAM and 2 GB storage. If you want to play shoot-'em-up action games, get a joystick and multimedia capabilities. The hardware requirements listed on software boxes are minimum system requirements—get the recommended amounts. But you don't necessarily need top-of-the-line merchandise if you simply want to do word processing, your finances, a bit of online communication, and perhaps a game or two.

**2. Order in advance** • Over 60 percent of computer sales occur during the pre-Christmas buying season. That means you can't expect the exact model you want to be in stock on Christmas Eve. You may be able to get the store to hold it for you so no snooping present hound finds your surprise, but make sure you order it in advance.

**3. Get everything you need and try it out in advance** • You probably don't want to leave the computer at the store until the last minute, anyway. You should assemble it beforehand and install software and games to make sure everything works. Don't assume everything you need—RAM, storage, components, cables, or drivers—comes with your purchase.

**4. Get the right software** • If someone is asking for specific type of software, write down the name and details of version number, manufacturer, and what the application does. Before you buy any software, tell the salesperson exactly what system you have, along

with all the specifications. Don't get the upgrade version, for example, if you need the full package. In general, you can't return software once you've opened it, so don't open anything you are uncertain about.

**5. Don't forget the little things** • You'll need a mouse pad, floppy disks, and printer accessories, such as paper and printer cartridges (black only or CMYK for colour printers). You might also want dust covers, isopropyl alcohol (to clean the mouse, keyboard, and other components) and a plastic disk holder. The box protects against magnets that can damage or destroy any digitally stored files. As there are magnets in your monitor, telephone, and speakers, a plastic box is a good investment.

**6. Protect yourself** • Good quality power bar/surge protectors are well worth the \$40 to \$60 expense if you ever have any valuable information on your machine. Don't forget power spikes can travel down telephone lines as well, so get a modem surge protector. As well, get utilities to protect your files. You don't want the kids downloading viruses from the Internet or posting your tax returns to their favourite newsgroup. Virus-protection software keeps out malicious programs from the Internet and diskettes, and encryption software can lock out access to your personal information.

**7. Think of the environment** • A computer needs to feel comfortable in its surroundings, so give it air, warmth, and light. Clean out the heating ducts and make the area free of dust that can damage the works and reduce your computer's usable life. Keep the heat at room temperature (never below 10 C or higher than 30 C). Have a high-voltage overhead light or nearby lighting fixture. Natural light is terrific, but a window with direct sunlight facing you or behind you can strain and damage your eyes.

**8. Get comfortable furniture** • The desk or table should be at a height to allow your elbows to curve slightly down. The chair should allow your feet to rest easily on the ground, it should support your arms and lower back, and be adjustable for everyone who will use it. Position your monitor so the screen is directly in front of you and there's no need to bend your neck or raise or lower your eyes at angles of more than 15 degrees.

**9. Don't put it under the tree** • In the thrill of the season, drinks or the water from the tree holder can spill, damaging your expensive new present. If the computer is on the floor, the liquid will find it. Pine needles and sap can get into the key pad and gum up the works. The floor may be too cold for the machine. Besides, you really don't want anyone shaking the wrapped computer to figure out what it might be. Keep the computer separate from the other presents before and after the unwrapping.

**10. Keep the boxes, manuals, plastic bags, and packing materials** • They do take up a lot of space, but the boxes are useful (in fact, necessary) if you have to return the computer for exchange or repair, and they're great for moving. Nest small boxes inside the larger ones and don't forget to seal the boxes to keep dust out. ♦

Caryn Mladen is a technology consultant and co-author of *The Canadian Computer Handbook*.



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BY LYNN GREINER

The market sweet spot for personal computers has historically been around the \$2,500 mark. When a technology hits that magic price point, it's considered mainstream. But there are always those of us who want it all, and can afford to pay the price. Like car owners who love their BMWs and Jaguars, high-end computer buffs want all the bells and whistles.

Although those bells and whistles aren't as expensive as they used to be, they're still not exactly budget priced. We

looked at a couple of sexy systems that will lighten your bank account by around \$5,000, to see what that kind of money will buy.

## Buy design?

The IBM Aptiva S62 offers a sleek black split-system design that has won several design awards for IBM. The tower is a fairly featureless box, with a convenient handle on top, which can sit up to six feet away from the user. The reason you can get away with this is that the floppy drive and DVD drive are in a separate console, which can sit under the monitor. This console also harbours the power switch and disk activity lights, so the user has no reason to even look at the tower.

The 17-inch multimedia monitor has a unique stand that allows the console to sit under it (it also comes with a normal monitor stand). The speakers are on the sides of the monitor.

The guts of this system are as attractive as its exterior: a 266 MHz Pentium II processor with MMX, with 32 MB RAM and a 6.4 GB hard drive—enough to keep the most dedicated clutter hound in disk space for awhile. The DVD-

ROM drive also functions as a 20x CD-ROM drive.

The video is generated by an ATI 3D Rage Pro with 2 MB video memory, and AGP (hardware MPEG-2 is built in), and the audio—Dolby Digital Sound through Bose speakers (including a sub-woofer)—will rattle your teeth. A K56Flex modem provides

communication capabilities, and there are USB ports on both system box and console.

The keyboard is IBM's EZButton Keyboard, with preprogrammed buttons that launch software, plus controls for the virtual answering machine. IBM supplies a ScrollPoint Mouse.

The software suite includes Windows 95 with Plus Pack, Lotus SmartSuite 97, Quicken SE, the World Book 1997 Multimedia Encyclopedia, several games, Aptiva Photo Director (which includes Adobe Photo Deluxe, Storm's Easy Photo, and Kodak Picture Postcard), IBM AntiVirus, sound software, RingCentral, which handles telephony, and a collection of communications software, from the usual CompuServe and America Online signups to a set of Internet software. As an added bonus, VoiceType Connection for Netscape is

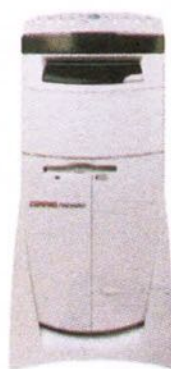
included, which allows you to give Netscape voice commands instead of typing or mousing (after you've trained the software to understand your voice, that is).

## Impressive Presario

The Compaq Presario line's high-end system is the 4840, a system whose smooth lines aren't as artistic as the Aptiva's, but are quite attractive. It, too, is loaded, and it, too, will set you back around \$5,000, with monitor.

The configuration is a power user's joy: a

continued on page 13



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# Apple hardware holiday wish list

BY DAVID ROSEN

**H**ave you been naughty or nice this year? Well, perhaps Santa—or your local computer retailer—will be good to you this holiday season and bring you one of the computers we've put on our holiday wish list. With Mac prices dropping like snowflakes in, well, December, it pays to shop around for the best price and service combination.

## Power to the people

For about \$5,000 you can get Power Mac 9600/300, Apple's top system for publishing, scientific, and Web solutions. The 9600 is based around a PowerPC 604e chip running at a screaming 300 MHz. Worried about buying a new box without lots of RAM? Of course you are! Apple's hardware elves had you in mind when they thoughtfully stuffed a whopping 64 MB of RAM into your computer. Still not enough memory? Don't worry, the Power Mac 9600 can be expanded up to 768 MB of RAM!

Other goodies include a 4 GB hard drive, an Iomega Zip drive, a 24x CD-ROM drive, 8 MB of video RAM, a graphics accelerator, built-in 10Base-T and AAUI Ethernet connections, and lots of other neat gadgets. Just think, with this much cool stuff, you'll be able to make a big list of your own and check it twice.

The PowerBook 3400 is still the fastest notebook computer on the planet. With the high-end model equipped with a 240 MHz Power PC 603e chip, the PowerBook 3400 brings desktop-level performance to any seat on the ol' sleigh! Three different configurations range in price from around \$4,300 to \$6,000 and come equipped with a 1.3, 2, or 3 GB hard drive, respectively.

All three models feature 16 MB of RAM (expandable to 144 MB), a 12x CD-ROM drive, a 33.6 Kbps modem, and a magnificent 12.1-inch active matrix LCD screen that will

do justice to Rudolph's bright red nose. Finally, the PowerBook 3400 features an open expansion bay for another hard drive, a magneto-optical (MO) drive, or a Zip drive.

## Affordable treats?

Still a little too rich for your blood? Not to fear, Umax is here. Umax, the only company still left in the Apple cloning business, sells its SuperMac C500 for a price that will cause your wallet to thaw: \$1,399. For this low figure, you get a computer built around a 200 MHz PowerPC 603e processor, 16 MB of RAM (expandable to 144 MB), and a 2 GB hard drive. Hardly a reindeer feed! You also get an 8x CD-ROM drive, 16-bit SRS stereo surround sound with built-in speakers and 1 MB of video RAM.

A really cool gadget is Apple's clamshell-shaped eMate 300 computer, available in a range of colours including a translucent green. As soon as you see the thing, you know the eMate is definitely not a Mac or a PC—although it can exchange files with either. The eMate 300 sports some built-in software applications for students, including basic word processing, drawing, a spreadsheet, graphing calculator, address book, and electronic calendar.

The eMate 300's unique industrial design is rugged enough to withstand the rigors of being carried, shared, and used in a variety of environments. It's easily portable for elementary students, since it weighs less than 1.8 kg (4 lb.) and is small enough to fit in a backpack—or Santa's sack. Apple claims the machine's long battery life (about 24 hours of continuous use between recharges) and the full-width backlit screen makes it possible for students to work wherever they want, for as long as they want. It's a cool product for the student on your shopping list, even if it is on the pricey side at just under \$1,100. ♦

## Expensive toys

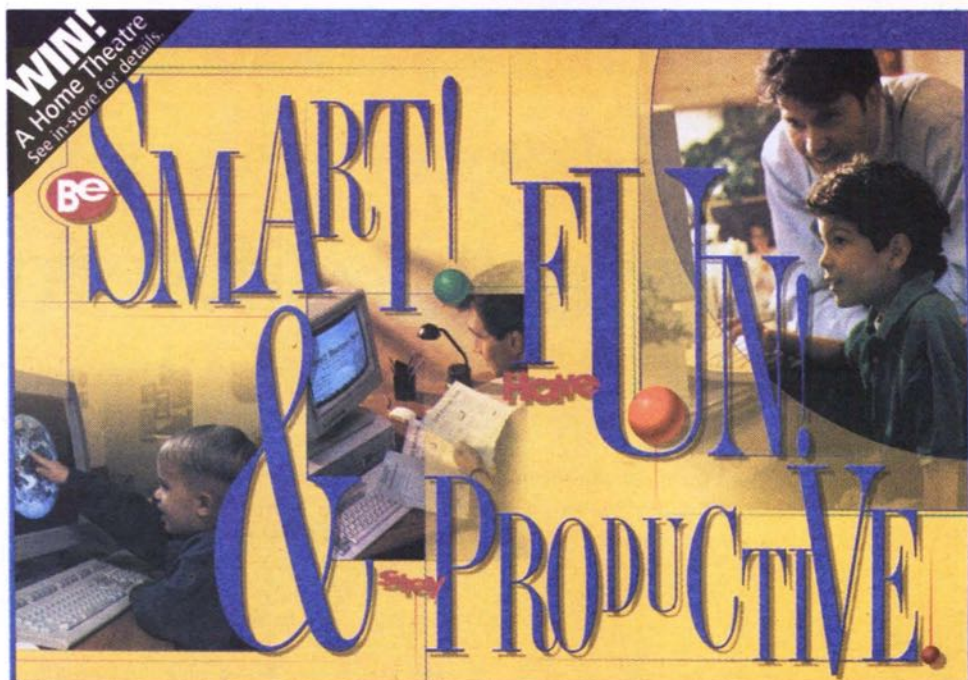
continued from page 12

266 MHz Pentium II with 32 MB RAM and a 6.5 GB hard drive. The video, like IBM's, is from ATI, and offers AGP support and MPEG-2 support. Compaq doubles the video memory to 4 MB. There are two USB ports.

Audio features include Dolby Digital Surround Sound, and JBL 3D Virtual Theatre. The speakers are attached to the monitor like ears (assuming you choose the multimedia model), but the separate subwoofer is optional.

The modem is a K56Flex card, with telephony features built in to give you a full duplex speakerphone and answering machine. The Compaq Creativity Imaging Centre lets you capture images from a camcorder or VCR, and edit still photos.

Software on CD-ROM or DVD discs includes Windows 95, Colordesk, Intel Video Capture Utility, Microsoft Money 97, Microsoft Works, Sim City 2000 Network Edition, a litter of Internet software, Microsoft Bookshelf 1996-1997, Microsoft Creative Writer 2, Microsoft Encarta 97 Encyclopedia, iPhoto Express, Warren Miller's Ski World, and Formula 1. ♦



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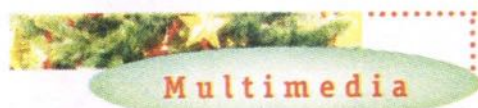
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# Multimedia gifts for kids

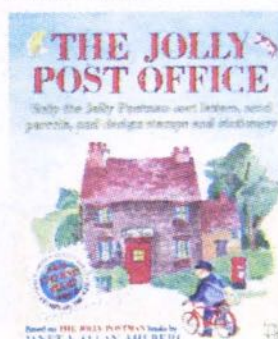
BY SANDRA MINGAIL

**M**ultimedia publishers have churned out a huge assortment of top-notch titles for the holiday season. They include enticing graphics, stunning colours, virtual-reality sequences, 3D environments, music clips, use of voice technology, and involve familiar book characters to coax young computer users to explore screens and play games. Here are some titles to check out at your favourite computer store.

## The Jolly Post Office

DK Multimedia (Mac/Win)

Young fans of the Jolly Postman books by Janet and Allan Ahlberg will no doubt be drawn to this title. There is no story line here. Instead, youngsters find themselves in charge of the post office—a delightful room with clickable hot spots that transport them to a collection of activities. Basic drag-and-drop mouse skills, simple addition, a stamp-colouring activity, and the equivalent of an onscreen game of concentration are



among the familiar games. Most activities provide three difficulty levels.

Those with a modem and Internet access can design a stamp, and send it electronically to the online World Stamp Book. A geography game helps children learn about each of the United States—as a patriotic Canuck, I felt rather left out. The Jolly Post Office is a good introduction to computer use best suited for very young children.

## Inventor Labs: Transportation

Houghton Mifflin Interactive (Mac/Win)

If you have a child keen on discovering the scientific principles and history behind planes, trains, and cars, this title will be a sure hit in your household. Three virtual labs are presented using a combination of interactive Quicktime VR, live-action video clips, and scrollable text.

In each lab, visitors navigate a room filled with objects to animate, listen to short audio descriptions about inventions, and explore drawings, scrapbooks, and tools.

Wander through the Wright brothers' workshop. Meet Gottlieb Daimler, inventor of the internal combustion engine. Glimpse back at the discovery of steam-powered locomotion with George Stephenson. Budding car racers can design their own vehicle, test drive it on a series of courses, then adjust components that affect the car's drag, friction, and thrust.

On the downside, several text passages contain formatting errors that detract from the overall product appearance. All in all, though, this title contains good depth of scientific content and an engaging presentation.

## Talk to Me: French

Globalink (Win)

Second-language learning is most effective when the learner can listen, imitate, and interact with another person. This program employs the use of speech-recognition software to model an actual encounter with a foreign speaker. The student hears a phrase, and sees an onscreen voiceprint of the spoken

words. The phrase is repeated into a microphone (included in the package) and an instant bar chart is displayed that compares the recorded phrase with the native speaker's phrase. Students can focus on a particular section of a sentence as well as adjust the acceptance level. The higher the acceptance level, the more demanding pronunciation standards will be.

Students progress through a series of simulated situations, offering responses to computer-generated questions. Additional exercises include fill-in-the-blank phrases, placing words in the proper order, dictation exercises to type text that is read by the computer, and a hangman game. This program is based on an immersion approach to language learning. Its strength is in the oral component. Some prior familiarity with French is needed, as well as a bit of patience to tweak the voice technology.

## Astro Algebra

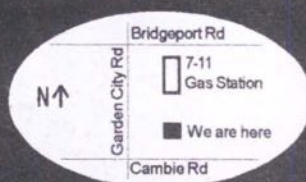
Edmark (Mac/Win)

In keeping with the Edmark tradition, this



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  - LS120 120MB FD
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  - Microsoft IntelliMouse
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- Pentium 233 \$6068  
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In keeping with the Edmark tradition, this title is both highly entertaining as well as filled with educational content. Students play the role of a space traveller charged with a series of crucial algebra missions to be carried out aboard the flagship Algebra Centauri. Algebra content is comprehensive including order of notations, exponential notation, factoring expressions, graphing, and much more. The tool kit includes the handy Astronet, a hyperlinked interface that introduces math concepts supported by text, audio, and mini-animations. The calculator demonstrates the order of operations in action and also includes a Function Machine that plugs in values for variables. There's plenty of in-context help and a built-in grow slide that automatically increases the difficulty of missions as student's proceed.

The adult option allows parents or teachers to customize the program for particular learning needs. There's a fair bit of game "jargon" to absorb and some of the games are a bit tricky to instantly know what's expected. But for students in junior high and early high school, this title will surely entice them to practice those algebra skills.

#### ClarisWorks for Kids

Claris (Mac)

The general productivity title ClarisWorks has always been a popular choice for Mac-equipped elementary schools. But the program has always aimed at about Grade 4 or 5 students and up. Now Claris is appealing to the preschool and early primary grades, with ClarisWorks for Kids.

Billed as a simplified ClarisWorks, this new title incorporates an Art Pad for painting, a Writing Pad for simple word processing, a List Pad as an introductory database, and a Graphing Pad for introductory spreadsheets. Ready-made templates provide off-the-shelf activities such as math flash cards, weekly weather charts, and newsletters. Movie and sound clips enable children to create simple multimedia reports. The program reads ClarisWorks 4.0 documents, so parents and teachers can create files, then load them directly into ClarisWorks for Kids. Those with Internet connections can visit the Claris Web site and download additional clip art, tips, and templates.

This title will certainly get lots of use in households and classrooms with very young children. Too bad the Windows version is still about half a year away.

#### Encarta Virtual Globe: 1998 Edition



Microsoft (Win)

If you're yearning for a whirlwind global jaunt, but can't seem to find the time or the bucks, Microsoft's Virtual Globe may be just what you need. Menu design and access and

user interface is strikingly similar to Encarta Encyclopedia. The CD-ROM packs in more than 6,000 articles, 5,000 images and music, video and sound clips, and more than 1.2 million place names. But the powerful navigation is what really makes this title a winner. Click on a map to zoom in or out, or simply drag the

mouse across a map to move in any direction. More than a dozen thematic maps detail satellite views, population densities, and physical attributes (although the ability to produce map overlays would have been nice).

Feel like flying? Three dimensional simulated flights over selected regions provide a bird's-

eye view of the land's geographic traits—you can even select the altitude and angle of flight. A good selection of Web links take you directly to sites that provide more statistics or articles to explore. During installation, a slight annoyance was the inability to bypass installation of the Microsoft Explorer browser. ♦

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# Gift shopping on the Net

## A cure for mall madness this holiday season

BY JUNE CAMPBELL

Christmas is coming and so is the annual shopping frenzy. For those of us who abhor crowded shopping malls filled with identical shops, Internet shopping offers a sanity-saving alternative.

Last year, I did all of my Christmas shopping via the Internet, and I'll be continuing the practice this year.

"But how safe is it to use a credit card over the Net?" I hear some of you asking.

"Very safe," according to Sandy Fleischer of Stria Communications (<http://www.stria.ca>). "In August of 1995, Stria Communications launched Canada's first secure transactional World Wide Web site. Since then, we have watched Internet commerce gain acceptance in both business-to-business and consumer markets, with online sales increasing steadily in both areas."

### Overcoming the fear

"As is to be expected, the consumer area has been more cautious in accepting Internet commerce. What the industry as a whole needs to focus on is perception: consumers are frightened by various nightmare scenarios about their credit-card number being intercepted. Consumers are only getting the hype—they need to know the facts."

"When buying a consumer good, I would rather submit my credit information through a securely encrypted Web site than entrust this information to an unknown clerk at the mall. With new stan-

dards like SET, the credit information doesn't even go to the merchant, but directly to the bank—how much safer can you get?"

These Canadian sites offer items ranging from traditional to unique. Happy shopping.

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**The Canadian Condom Company Online:** As the owner remarked, "It's a good gift for some people."

<http://www.islandnet.com/Condomville>

**Canadian Internet Mall:** A wide selection of items.

<http://www.Cdn-Mall.com>

**Canadian Parents Shopping Mall:** Items for parents and kids. <http://www.canadianparents.com/mall/index.htm>

**Celebrity Lights Cookbook:** Raises funds for breast cancer research.

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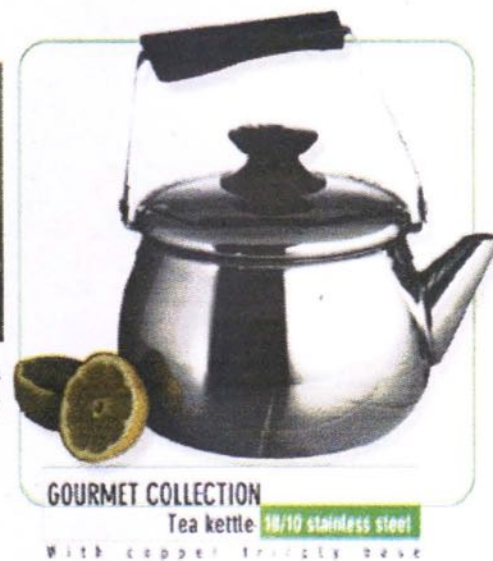
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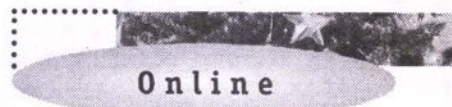


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June Campbell is the owner of Nightcats Multimedia Productions. You can reach her by email at [campbelj@istar.ca](mailto:campbelj@istar.ca) or by phoning 604-980-3261 during business hours.



## AE Electronics Internet Services Provider

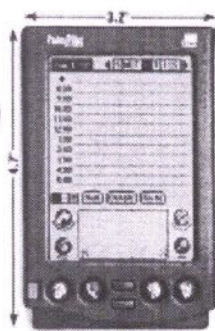
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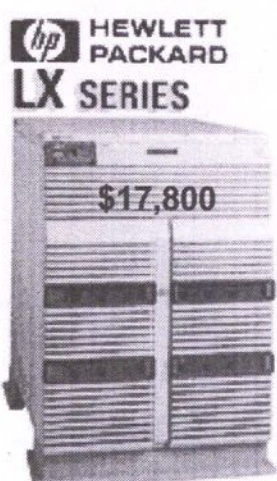
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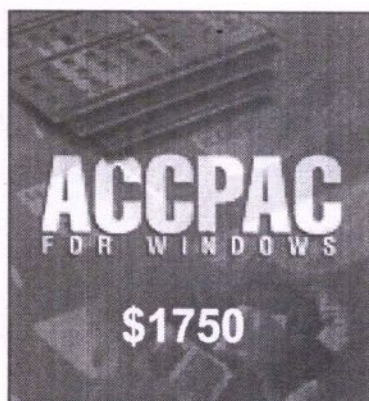
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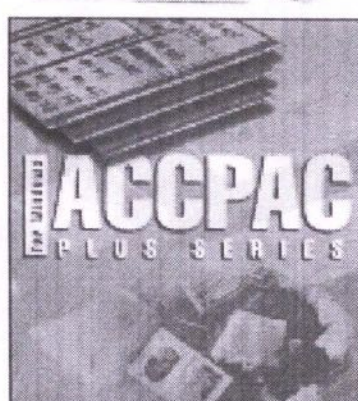
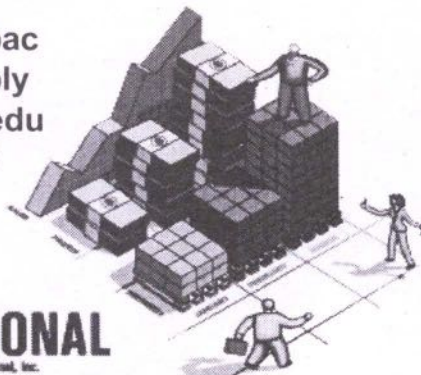
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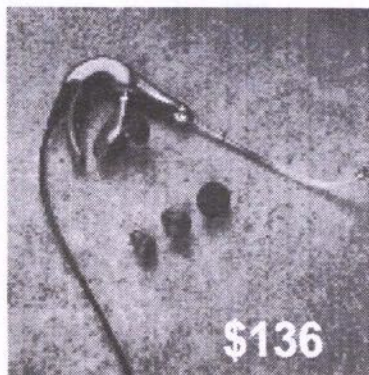
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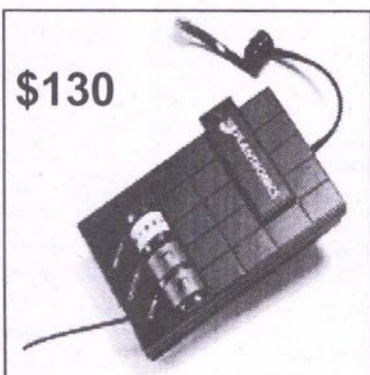
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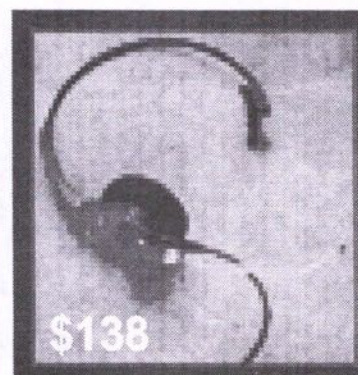
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# Microsoft Flight Simulator 98:

The next best thing to flying there



Flight Simulator 98, from Microsoft. Wings or NT. \$79.95.  
<http://www.microsoft.com/games/fsim/news.htm>

BY PETER O. WALPOLE

I saw a beta version of Flight Simulator 98 at Comdex, and while it was a little rough, I wanted to try it myself. I cleaned previous versions and scenery off my drive to make room—a standard install takes about 100 MB and a full installation (all scenery, and so on) needs around .5 GB. Setup was easy from the CD-ROM.

I was amazed by the improvements: greatly enhanced sound quality (so good you may need to degrade it to avoid conflicts with your video card), near photo-realistic rendering of the various cockpit panels, 3,000 airports, 20 new metropolitan areas in the United States, and improved locales in Canada. Your favorite aircraft are supplemented by a new, non-retractable C182S, a Bell helicopter, and a super new Learjet 45.

FS98 manages to extend the capabilities of the newest hardware to the limit. It takes advantage of MMX features, Direct3D video acceleration, and force feedback joysticks. On my older Gateway with a Pentium 166 MHz processor and Matrox card, the performance is nothing less than amazing. The overall flow of scenery has been most impressive. The only time I've had to pause to load scenery, while in flight, was when I crossed from one major scenery area to another.

Rattles, squeaks, and all

The handling of previous virtual aircraft (particularly the Cessna) was very real. The new aircraft are even more real. The tiny rattle from the Cessna's wings on takeoff or landing, for instance, is there. If you land wing low in a cross wind, you'll hear the low tire squeal first! The degree of in-flight stability feels very familiar.

This flight sim will run on any Windows 95 or NT system, and as usual, the faster computer with more memory will excel. I'll need to update to Direct3D and MMX to get all the performance improvements. My low-cost joystick can't access all the available features. I'll check-out a force feedback digital very soon. You can change the standard keyboard or joystick functions to meet your needs.

Soon you'll be able to run multiple monitors, with different views in each. You can indulge in multi-player flight over the Web. Aircraft and scenery for FS5.0 can be imported using a converter that can be downloaded for free. Scenery add-on disks are still usable, but all the scenery you need is here.

The trend is towards online documentation. The Airport Directory has most of the must-have data online. Airplane spec sheets are detailed. Lessons are thorough and demanding. The Adventures and Challenges are getting harder and better. There's an online checklist available for procedures.

While FS98 is not the real thing, it comes close. There are numerous small improvements, and major additions and new features. Just the way the instrument needles move

(realistically) is impressive. This is a huge program demanding a performance machine to fly, but my older computer does a great job. FS98 is about to give me hours of virtual flying anxiety (just like the real thing). ♦

You can find Peter Walpole at [pwalpole@barint.on.ca](mailto:pwalpole@barint.on.ca) or at 3,500 feet over southern Ontario.





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# Virtual hockey excitement

info

box

**NHL PowerPlay 98**, from Virgin Interactive. Available for Win95 PC, Sega. \$50-\$60. <http://www.vie.com>

**NHL 98**, from Electronic Arts. Available for Win95 PC, Sony Playstation, and other formats. \$50-\$60. <http://www.easports.com>

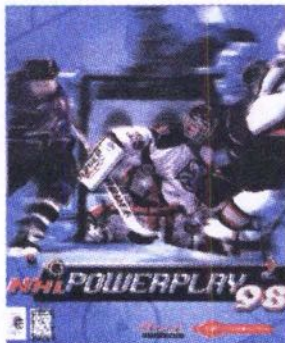
BY ALAN ZISMAN

As the first signs of winter arrive, many a young Canadian's thoughts turn to the hockey season—or in this new, digital reality, the virtual hockey season.

And while the real game of hockey (you know, the one played with actual skates, sticks, and pucks on actual ice) has become increasingly shared by Canadians with Americans, Czechs, Russians, Swedes, and Finns, two of the predominant computer hock-

ey games are proudly created by Canadian programmers—even though the products are marketed by American software companies.

To put our two 1998-season virtual hockey games to the test, we assembled a test-panel of three 13-year-old, Grade 8 game players: Frankie, Joey, and Kevin. Their job: to play Virgin Interactive's NHL Powerplay 98 and Electronic Arts' NHL 98, and to do their best to assess each program's strengths and weaknesses. After looking at each game on its own, they were asked to compare the two.



## NHL PowerPlay 98

Virgin Interactive is a relative newcomer to the PC game market. The software, as well as similar versions for dedicated game systems, is programmed by Vancouver's Radical Entertainment.

First impressions by the test panel were overwhelmingly positive. Kevin, for example, found the initial graphics "awesome," and all were pleased to report that the game was easy to learn. Starting off with home team

Vancouver, they found that the pre-season trade for then-Ranger Marc Messier occurred too late for Messier to make it to the virtual Canuck's lineup, but they reported it was easy to get him to don their team's virtual uniform (and yes, the game did feature the Canucks' new logo and uniform).

Frankie, however, was disconcerted by the shifting camera angles. While perhaps meant as a new feature, he found it distracting.

Despite that, all the boys found it easy to play and easy to score. In

fact, their main criticism of PowerPlay 98 was that it was too easy to score. Kevin reported playing a game where he scored 11 goals, which made the game seem unrealistic.

On average, the boys rated this game six out of a possible 10 points, and suggested it might be a good choice for a younger child or a child

who hadn't spent as much time as they had at computer games.

## NHL 98

This is at least the fifth incarnation of Electronic Arts' hockey game, and it shows. Each season has offered more features and more sophisticated graphics. This year is no exception.

Kevin found the graphics "outstanding," while Joey considered them "amazing." The panel was equally impressed with the sound effects and music, which Kevin reported were "just like reality." Frankie noted how realistic it sounded when the players smashed

into the boards. They liked the ongoing announcing: in PowerPlay, the announcer only came on when a player scored, but in NHL 98, the announcer offers play-by-play comments on players' past seasons, statistics and more.

This game, released about a month later than PowerPlay, managed to get Marc Messier suited

continued on page 24

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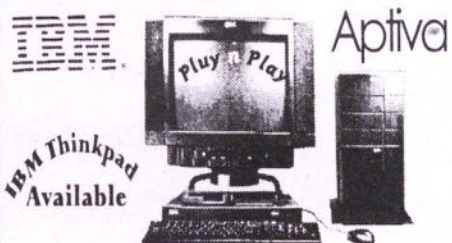
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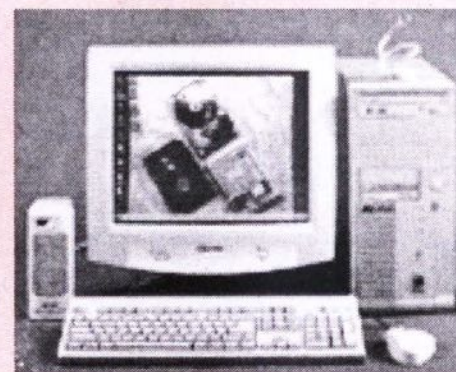
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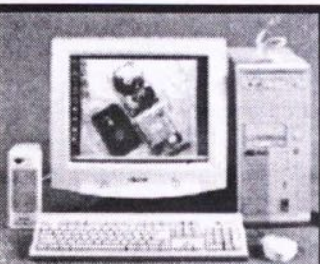
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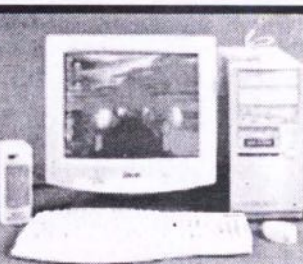
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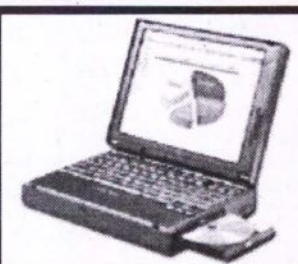
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BY ALAN THWAITS

In the first two articles in this series, we looked at what Linux is and where to find it. In this article, we'll answer the question, "Now that I've got Linux installed, what am I going to do with it?"

After all, even the best tool in the known computing universe is just a bunch of code unless it actually does something useful, right? And we all have to live in the real world, where the gee whiz factor is going to take you only so far.

James Bailie is as nitty gritty as you can get, and so is News Peruser, the Linux offline news reader he's developed. Bailie's "real-world" job is at GM's Diesel Division in London, Ont., where he helps build railway locomotives. His passion, though, is Linux.

He first got involved with the Linux in 1995, and quickly became interested in programming with it. He had become frustrated when using Windows, and trying to multi-task while reading Usenet newsgroups. Existing Linux newsreaders were fine for online reading, but Bailie wanted an offline reader, since he pays his Internet service provider for minute-by-minute access. So he began work on the Linux offline mailreader that became News Peruser. Bailie is a self-taught programmer, but Peruser is slick and sophisticated enough to go head-to-head with the best commercial applications.

### Out from the "Evil Empire's" shadow

Recently, James showcased News Peruser to members of the Toronto Linux User Group, who were warm in their praise of the program. After James' presentation, conversation turned to how members use Linux applications for both commercial and personal purposes. A lot of examples were given—enough to surprise those who live under the illusion that the world is dominated by Microsoft.

Bill Duncan works as a systems administrator and programmer/analyst in Toronto. He also runs a small Internet services organization called BeachNet Communications, which runs entirely on Linux machines. Lest you think Linux is only useful for network and online work, Duncan is quick to remind you that he also uses Linux for "all the mundane office stuff: word processing, databases, spreadsheets, and so on."

Evan Leibovitch of Brampton runs a company called Sound Software (the company made great Linux buttons that were handed

out at this year's Comdex Canada show in Toronto). Sound Software, says Leibovitch, "is both a user of Linux and a VAR/consult-

ing firm that implements Linux in business environments. We use Linux both as a stand-alone workstation [capable of running Web

browsers or office-productivity applications] and as a server [running an organization's

continued on page 24

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## Working with Linux

continued from page 23

Internet/intranet operations]."

### Ask a simple question...

Why do knowledgeable business people like

Bailie, Duncan, and Leibovitch use and recommend Linux? The short and sweet answer is because it works!

"I highly recommend Linux as a stable, reliable, and open platform," says Duncan. "It still needs to reach a 'critical mass' of both users and applications. But I believe

we're fast approaching the point where many companies are recognizing there's a significant Linux market developing. It certainly offers a far better platform than the more popular platform for most applications."

Leibovitch agrees Linux is here to stay. "Linux has already broken into the general user

market. You can now buy Linux CD-ROMs at most computer retailers and bookstores. Mainstream companies such as Netscape and Corel support it with applications. At Sound Software, we've sold commercial implementations of Linux into federal and provincial government installations, as well as to some of Canada's largest companies."

The facts are on Linux's side, and they illustrate its applicability to general usage. The combination of Linux and an Intel-based PC makes for a powerful UNIX machine, and is ideal for individuals or organizations that can't afford Sun or HP workstations for every user. In the application server role, many companies recycle their 286 and 386 machines to act as a dumb X terminal, forming the basis of a low-budget X Windows network. Educational institutions and commercial organizations alike are enthusiastically embracing Linux as an enterprise server for file and print-sharing. Linux can be configured to use NFS, AppleTalk, and NetBIOS protocols.

As a child of the Internet, Linux excels at providing Internet services. Tools for the Web, ftp, Usenet news, email, and more are usually supplied with Linux by default. When combined with dial-up modems, Linux becomes a formidable Internet access point environment—a good number of commercial Internet service providers have chosen Linux because of its reliability and performance.

### Millions served

The current installed base of Linux is estimated to be between three and five million users. Some of them are folks like Bailie, Duncan, and Leibovitch. Others are general users who are looking for cost-effective performance and compatibility with real world usage. Still others bring it all down to the way in which Linux was—and is being—developed. As Leibovitch says, "The rewards of a truly open system are very valuable to those who choose to exploit it. And the model of community-based rather than vendor-based technical support is often much better at solving problems." ♦

### Virtual hockey excitement

continued from page 20

up as a Canuck—perhaps a good thing. The panel reported it was possible for them to trade players, but not as easily as with PowerPlay.

The panel again reported that while it was easy to get started playing, they all found it more difficult to score with this game, both playing each other or against the computer. In an equivalent game to a PowerPlay one that had ended with a score of 9-7, the NHL 98 score was a more realistic 2-1. They found it offered a more satisfying level of challenge.

They liked being able to manually change camera angles in NHL 98. And they liked being able to play one another, as well as versus the computer. While PowerPlay advertises a multi-player feature, our test panel was unable to find it.

Rated on a score of one to 10, the panel rated this one a perfect 10, while Kevin gave it an 11, claiming "it's just off the charts." For this test panel, Electronic Arts retains its crown as virtual hockey-game champion—at least for the current season. ♦

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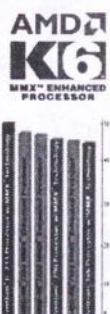


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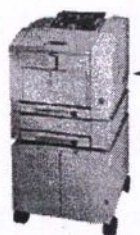
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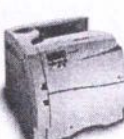
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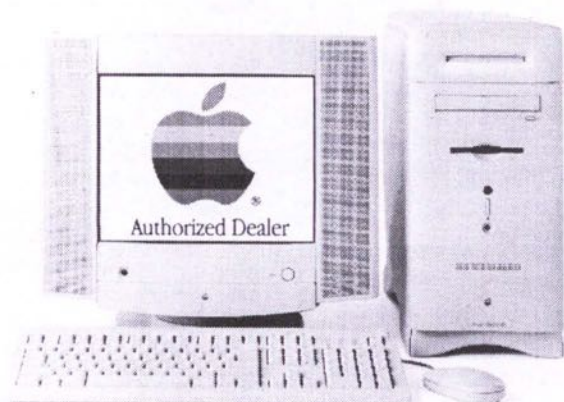
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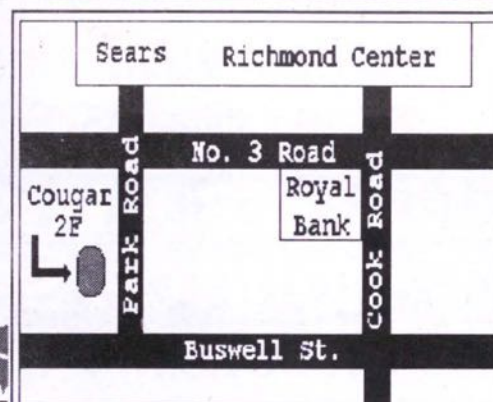
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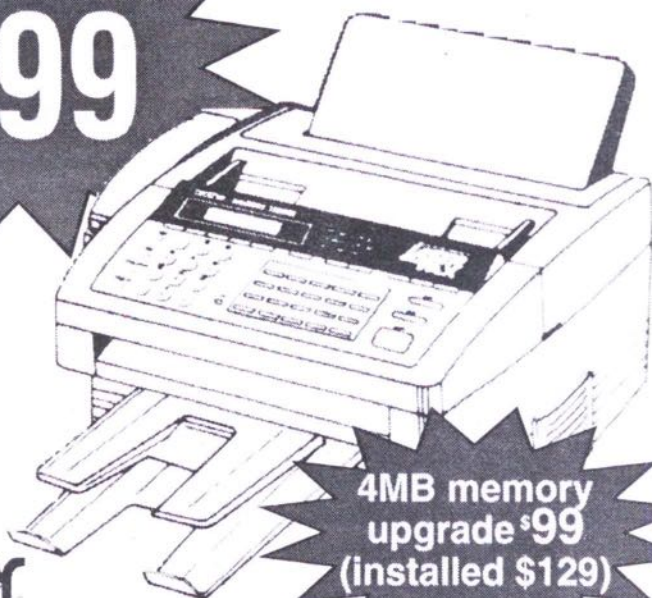
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## Software

# Gamer's guide to great gift giving

## info box

All games retail for approximately \$55 to \$75. Remember to check system requirements before buying anything. Happy holidays!

BY MARC SALTZMAN

The only thing more difficult than choosing the best PC games of the year is choosing the best PC games of the year two months before the holiday season. In fact, it's not uncommon for computer-game companies to wait until the Christmas shopping season to release their latest products. So we've selected the most outstanding products of 1997—to date.

Since not all players prefer the same type of games, the following top picks are listed by genre. Everybody in? It's been one helluva year...so let's begin!



### ACTION: Jedi Knight: Dark Forces II

This action packed sequel to 1994's Dark Forces is truly the best "Quake clone" everyone's talking about. In Jedi Knight, from Lucas Arts, you return as Kyle Katarn, the young mercenary out to avenge your father's death while stopping seven Dark Jedi from unlocking the powers of a hidden Jedi burial ground.

Learn the ways as a budding Jedi (honing both good and evil powers) and navigate around the Star Wars universe from either a first-person (à la Quake) or "over-the-shoulder" view (à la Tomb Raider or MDK). Other features include a true 3D environment, excellent multi-player support, impressive level design, jaw-dropping cut-scenes, a fully orchestrated CD soundtrack, and the ability to download thousands of custom-made levels from the Internet at no extra charge. Jedi Knight is the ultimate epic saga between good and evil. Which side will you join?

**Unreleased contender:** Quake II (id software/Activision)

**Runner-up:** Hexen II (Raven/id software/Activision)

### STRATEGY: Age of Empires

I was fortunate enough to snag a sneak peak

of this title from Ensemble Studios and Microsoft back in March and I've been raving about it ever since. It's now on the shelves and has been hogging the attention from the competition.

Bruce Shelley, co-designer with Sid Meier of the classic Civilization, is back with this addictive real-time strategy game for both new gamers and veterans.

Age of Empires places you back in the Stone Age, and through cunning war, resource management, trade, or technology



building, you can progress all the way up to the Tool Age and beyond. Play as one of 12 ancient civilizations across multiple campaigns and scenarios. The game is great for single player gray-matter crunching, or, for a real challenge, play for free over the Web against others via Microsoft's Internet Gaming Zone.

**Unreleased contenders:** Starcraft (Blizzard Entertainment), Myth (Bungie Software).

**Runners-up:** Total Annihilation (Cavedog/GT), Dark Reign (Auran/Activision), X-COM: Apocalypse (Microprose).



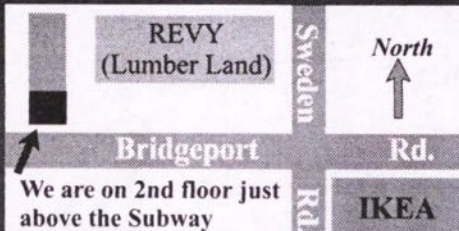
### ADVENTURE & RPGs: Riven

Riven, from Cyan/Broderbund/Red Orb Entertainment, is the highly anticipated sequel to Myst, the best-selling PC and Mac game of all time. After nearly four years of effort, brothers Rand and Robyn Miller are back again (with co-designer and co-director Richard Vander Wende) with a gorgeous fantasy game beginning where Myst left off.

Atrus tells you that Riven, a collection of five small islands, is collapsing and someone has to go in and save his wife Catherine and help free the rest of the D'ni people. Atrus also warns you that his malevolent, megalomaniac father, Gehn, has also been trapped on Riven for the past 30 years.

continued on page 29





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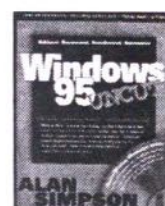
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## Gamers guide

continued from page 26

As with its predecessor, Riven is all about environment, mood, and immersion.

**Unreleased contenders:** Curse of Monkey Island (LucasArts), or Blade Runner (Westwood Studios).

**Runner-up adventure:** The Last Express (Red Orb Entertainment)

**Runners-up RPG:** Diablo (Blizzard), Ultima Online (Origin Systems).

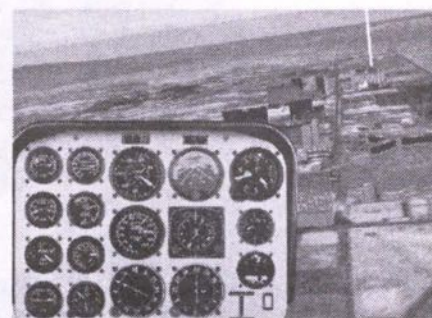


## SPORTS: NHL 98

For the second year in a row, EA Sports's hockey franchise wins for best PC sports game. New features include a 3Dfx version for unparalleled gameplay, glass-shattering hits, tournament mode with 44 teams, and over 500 real NHL players' faces superimposed on their bodies! NHL 98 is a must have for computer game fans itching for the perfect reason to stay inside this winter. (See full review of this game and NHL PowerPlay 98 on page 20.)

**Unreleased contender:** NBA Live 98 (EA Sports)

**Runners-up:** Moto Racer (Delphine Software/Electronic Arts), Links LS 1998 (Access Software), Jack Nicklaus 4 (Accolade)



## SIMULATIONS: Flight Simulator 98

The 15th anniversary edition of one of the longest running (or flying) franchises is far more than a simple makeover. This latest award-winning incarnation from Microsoft is by far the greatest sim to ever grace the PC. (See full review page of this product on page 18.)

**Unreleased contenders:** Wing Commander: Prophecy (Origin Systems), Flight Unlimited II (Looking Glass/EIDOS), 10th Planet (Bethesda Softworks), Longbow 2 (Jane's Combat Simulations).

**Runners-up:** Dungeon Keeper (Bullfrog/EA), X-Wing vs. Tie Fighter (LucasArts)

## PUZZLE/CLASSICS:

**You Don't Know Jack, Vol. 3**

**You Don't Know Jack: The Net Show**

No contest here. For the second year in a row, these hands-down winners from Berkeley Systems are the ultimate party

games of the 1990s.

Tom Gottlieb is back again as the host in You Don't Know Jack, Vol. 3, with the most roasts for up to three players attempting to tackle 800 new questions about modern pop culture. This volume of the irreverent quiz-show game also contains new

types of questions: the Super Audio question, Three-Way, and The Impossible Question.

You Don't Know Jack: The Net Show is the award-winning free version available on the BeZerk Web site. New questions are posted Mondays and Thursdays, and once a week for

the Sports edition. Also check out Acrophobia, Berkeley's new word game based on making silly acronyms.

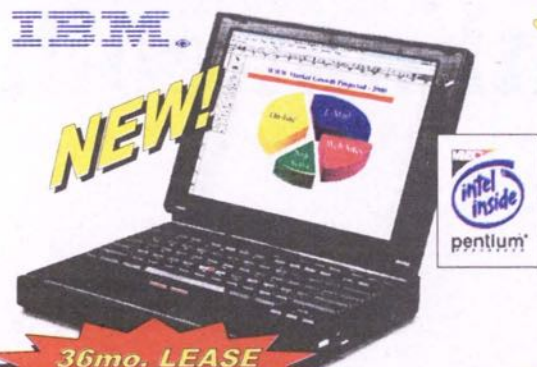
**Unreleased contender:** Smart Games Challenge #2 (Smart Games)

**Runner-up:** Lose Your Marbles (SegaSoft) ♦

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BY WILLIAM A. WOOD

**M**arc Saltzman's *G@mer's Web Directory* is a superb reference covering the Web resources available to today's gamers. And he should know, he's the game guru for the *Canada Computes!* publications.

As Saltzman points out in his introduction, the World Wide Web's growth over the last five years has not only changed the way games are previewed, produced, reviewed, and sold, but has fostered a worldwide community of gaming enthusiasts who share tips, resources, and experiences with each other.

Game companies are also using the Internet: to release patches, fixes, extra levels, and so on.

But with more and more Web pages popping up, it's often frustrating (and time-consuming) to locate the right sites containing the information you want, even with search engines (which are often less discriminating than we'd like).

Enter Saltzman's book. He has separated the wolves from the sheep for you, homing in on the best sites for a wide variety of up-to-

Rampage, and *You Don't Know Jack: Movies*), 4,000 cheat codes for hundreds of games, and an HTML (hypertext markup lan-

guage) version of the book that works in concert with your Internet browser (which means every site mentioned in the book becomes a

hot link! Very cool!).

If you like games (and who doesn't?), get this book. If I didn't already have it, I'd want it. ♦

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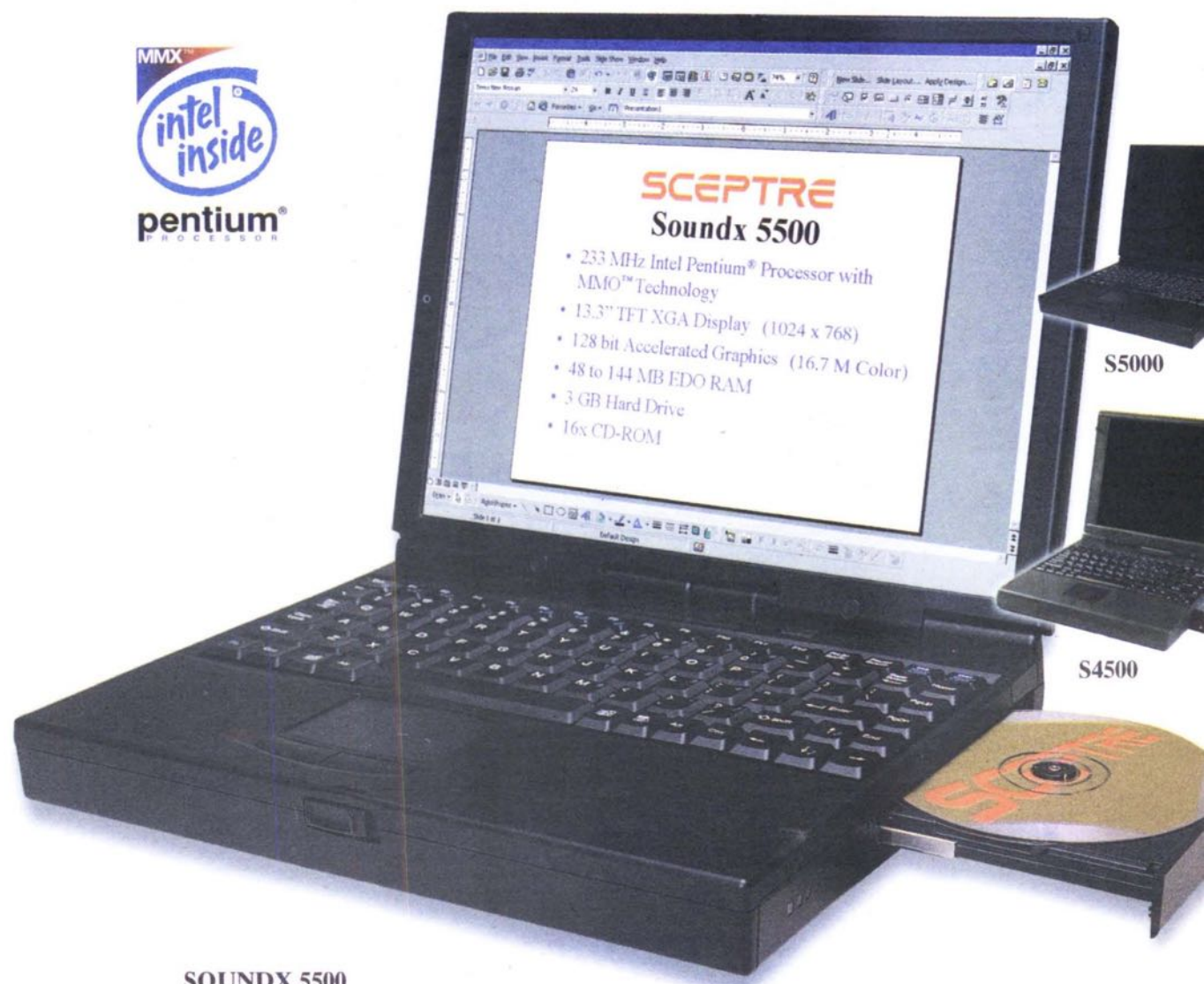


the-minute (and forthcoming) PC and console (Sega Saturn, Sony PlayStation, and Nintendo 64) games.

Both official and "unofficial" (which often outdo the official in scope and look) sites are covered.

The game-site portion of the book is well organized, by genre (strategy, action, puzzle—you name it). There's also a very handy index for those in a real hurry, plus pointers on multi-player gaming, and lists of the best gaming e-zines and game-company sites.

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One nice plus is the 3.5-inch floppy diskette that comes with *Investing Online*. It not only details sources, but, used in conjunction with a browser, with just a mouse click, can instantly take you to any of the sources mentioned in the book. Another plus is advice on where to get free and shareware investment-aid programs.

Eckett, although optimistic about online investing, does not let his enthusiasm run away with him. He lays out the pitfalls and provides a short but pithy section on cyber-scams.

Faults? Yes. *Investing Online* has a few. Eckett completely ignores Macintosh users, when little effort would be needed to include them. And the fast-changing Net also leaves him behind on occasion. Thus, because he appears to have finished writing in mid-1996, the book has only just been published. The result is that some material has already become outdated, such as his references to 33.6 Kbps modems being the fastest.

Nonetheless, *Investing Online*, is a book to always have handy. It's too heavy to take travelling, but don't stay at home without it.—Lee Lester



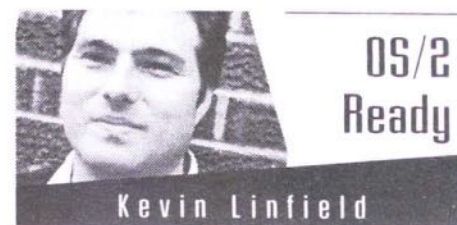
# Big news for OS/2, but no Netscape

There has been lots of news, and some rumours, coming from IBM in the last little while. Big news includes the release of WorkSpace On-Demand,

new OS/2 fixpaks, and large corporate OS/2 sales. No, still no Netscape 4 for OS/2, although there is one rumour about it.

## Newest OS/2 family member

IBM has released WorkSpace On-Demand (formerly code named Bluebird), the newest member



OS/2  
Ready

Kevin Linfield

of IBM's network software family. WorkSpace On-Demand is an Intel-based network operating system optimized for network computing. This managed client environment is based on OS/2 technology that enables administrators to manage clients from a single point of control at the server, utilizes a simple user interface, centralizes control of software applications, maintenance, and updates, as well as supporting existing applications (OS/2, DOS, and Windows 3.x), and includes 100 percent Pure Java capability.

WorkSpace On-Demand resides on top of OS/2 Warp Server and consists of two components: a client operating system image and a set of server-side utilities to manage that environment. Suggested retail price is US\$699 for the server licence, and US\$249 for a client licence (discounts are available for previous versions of OS/2 or for bulk packages). For more information, contact IBM at <http://www.software.ibm.com/workspace>

Nothing really interesting for home OS/2 users, but WorkSpace On-Demand is getting very positive reviews in the corporate environment.

## Fixpak update

Although fixpak 4 for Merlin is now available from IBM (as I type this), users who currently run fixpak 3 and don't want to upgrade should download the updated fixpak 3 OS/2 kernel. This update fixes problems running certain applications that worked before fixpak 3 was applied (such as IBM Works spreadsheet). It also fixes some SYS2070 problems, and adds some minor functionality that is required by IBM's Feature Install software. Download the new kernel and all OS/2 Warp 4 fixes from <ftp://service.boulder.ibm.com/ps/products/os2/fixes/v4warp/english-us/>. Remember to backup everything before you start, and you shouldn't apply a fixpak if everything works great on your system.

## OS/2 still not dead

News on the Net was abuzz when IBM reported it had struck a deal with South America's largest bank (Banco do Brasil), where the bank will deploy 8,000 OS/2 Warp Servers and 19,000 OS/2 clients across its 4,300 branches. Banco do Brasil also plans on incorporating IBM's new WorkSpace On-Demand to automatically deliver combinations of customized applications, data, and interface to both PCs and thin-clients.

News also surfaced claiming that First Virginia Banks Inc. will be rolling out 4,500 OS/2 Warp 4 clients to go with its 400 OS/2 Warp Server machines.

Can we finally say with certainty that OS/2 is not dead? IBM would never drop an operating

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# You asked us...

## Modem speeds revisited

**Q:** I am totally confused and befuddled by the whole matter of modem speeds. I own a 14.4Kbps modem and I hear wondrous tales of 28.8, 33.6, 56Kbps and even beyond that. But while downloading, my Netscape browser tells me that my modem is transmitting at speeds of a measly few hundred bytes per sec.

On top of that, the transfer times don't seem consistent with even those speeds. A file of a mere 44 KB, which, at 191 bits per second should take less than four minutes, takes a half an hour for me to download. I've tried the same file in the wee hours of the morning to see if traffic volume was the culprit. While things went a little bit faster, the difference was not significant. A friend has a more powerful system than mine and I still have never seen rates on his screen of any higher than 1200 baud.

Can you lend any insight to what's going on during downloads, why such slow rates prevail, and why download times defy even the stated rates of transfer? Thank you for any assistance you can render.

Dave, via an ISP

**MacShrink Dave Rosen replies:** I hear you. Modem speeds can be very confusing and Internet transmission times can be tough to figure out. It may speed your understanding (pun intended) to think of how a modem is similar to a car. Just as a car's speedometer can regis-

ter up to 200 kilometers per hour (or more), it doesn't mean people drive at the maximum speed—or at least, they probably don't.

You can buy a really fast car, capable of race track speeds, but you would still be limited by a number of factors. These factors include speed limits; road hazards (such as potholes and twists in the road); traffic conditions (such as sitting in traffic jams or being stuck behind a pile-up); and weather problems.

Modems are speed rated for the maximum number of bits of information they are capable of transmitting. For example, your 14,400 bits per second modem transmits at approximately 1,400 characters per second (skipping the complex math, the rule of thumb is to divide the rated speed by 10 to get the number of characters per second possible). In the good ol' days of text-only messages, 1,400 characters a second would mean that an one-page email could be transmitted in about a second—and that's pretty impressive.

In these days of multimedia-enriched files such as sound, animation, graphics, and even full motion video, however, transmission speeds of 1,400 characters per second can be agonizingly slow. As hardware speeds increase, software developers and content producers figure out more things to show (and send) you. Unfortunately, this means everything slows down to a crawl.

Nowadays, a 56Kbps modem is the standard

for surfing the Internet and downloading heavy-duty graphics. Some people are looking at cable "modems" that are rated many times quicker than the fastest traditional modem—at least for downloading.

Anyone who has ever used a modem has seen firsthand that they often fail to transmit at their maximum speed. Poor telephone lines, server glitches at your Internet service provider, problems on the Net itself, slow-downs at the host computer, and lots of other problems can cause the situation you describe. In addition, many folks run their computers "fully loaded," meaning their browser is just one of many applications their computers are juggling. Surfing the Net takes lot of processor power. Even the fastest Power Mac or Pentium-based computer will slow to a crawl if you ask it to do too much. Try surfing with only your browser running. You may see some dramatic speed improvements.

The important thing to keep in mind is that your transmission speed depends on the slowest link in your communications chain. Maybe it's your slow modem. Maybe you've connected using an old, noisy telephone line in the area. Then again, even if you buy a really fast modem, you'll still have problems if your favorite Web site is running on an old 80386-based clone in some kid's bedroom.

Try connecting to a host known to be fast and downloading. Sites such as Netscape's

home page (<http://www.netscape.com>) or Apple's head office (<http://www.apple.com>) are nice and fast and have lots of 56Kbps modems. Otherwise, have a chat with your ISP support people and figure out why your downloads are not up to speed.

## Partitions galore!

**Q:** I look for and enjoy your column every month. Keep up the good work. Now I have a problem that I hope you can help me with. I have a 3 GB SCSI drive with 10 partitions in my computer. As a backup, I have an identical SCSI portable drive partitioned exactly the same way. When I want to back up my OS/2 computer, I connect the backup drive and XCOPY everything including the operating system. This works great! If a drive craps out I can just discard it, use the backup and continue as if nothing has happened.

Now to the crux of my problem. I am contemplating purchasing a 9 GB SCSI so that I can backup several computers to the one backup SCSI drive. Problem is, OS/2 won't recognize drives after drive "Z" and if I partition a 9 GB drive the way I want to, I'll end up with 30 to 35 partitions. Is there a way around this?

Murray

**Kevin Linfield responds:** It is an OS/2 (and DOS and Windows) limitation that you cannot have more than 24 active partitions (drive C to Z).

continued on page 36

# coming up

## in January

- Privacy and Security
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## COMPUTER! PLAYER!





# You asked us...



continued from page 35

UNIX is one of the few operating systems that does not have this limitation. Instead of having so many drives, why not use subdirectories and then use ZIP (or any other compression utility) to store and transfer your system?

## Propaganda piece missing?

**Q:** I was wondering whatever happened to Just Add OS/2 Warp (JAOW)? I used that little piece of software to convince a lot of people to switch over to OS/2. It would probably be advantageous for IBM to make a new JAOW for Warp 4 and Warp Server.

**Andy**  
**Kevin Linfield responds:** As far as I know, IBM has finished development of this tool and is not planning on adding any Warp 4 or Server functionality. However, you can still get a copy of JAOW from <ftp://service.boulder.ibm.com/ps/products/os2/tools/jaow/>.

## FDISK gig gag

**Q:** I have a Quantum ST 6.4 GB hard drive and OS/2's FDISK just won't work with it. DOS's FDISK worked just fine but not OS/2's. It will not create any partition and will not read any partitions therefore I'm unable to install OS/2! Help!

**Rory**  
**Kevin Linfield responds:** There is new IDE device driver with support for large disks at

<ftp://ps.boulder.ibm.com/ps/products/os2/os2ddpak/DEDASD.EXE>. Just download and follow the included instructions.

## Defrag not required

**Q:** I'm somewhat new to OS/2 and notice Warp 4.0 doesn't come with a defrag utility. Is automatic defragmentation built into the HPFS file system or do you need to get a third-party tool?

**Brian**  
**Kevin Linfield responds:** OS/2's HPFS is far superior to the old FAT file system, and, to be honest, does not need to be defragmented for the average user. There are commercial, shareware, and freeware applications available that will defragment your HPFS partition, but you will probably not see any performance increase after using them. The only time you might want to consider it is if the drive is really full and you work with lots of large files. If you want to try one out, go to Hobbess (<http://hobbess.nmsu.edu>) and download one of the freeware ones.

## Mystery of the missing megs

**Q:** Finally I have found a paper written to my understanding. I have been reading your column and I hope you can help me. I will click on My Computer, then go to Hard Drive to check the amount of free space I have. Sometimes it will read as much as 270 MB and then the next time I check it will only read

258 MB. I will go on the Internet (via B.C. Tel's Sympatico service) read CNN, USA Today, Sports, etc., and maybe bookmark a page to go back to later. Again, if I check the Windows menu, the hard-disk space available appears to go down. I do not download from the Net (I do not know how to), so why is the hard drive fluctuating so much? I am informed that the only time the hard-drive space should decrease is if I download or add a program.

Can you help me? Thanks for reading this.  
**James**

**Alan Zisman responds:** There are several reasons why your free hard-drive space can change dramatically, as you describe:

1) Files could be building up in your Recycle Bin. These are not automatically emptied until they reach the maximum set in the Bin's options. If you want, you can lower the default amount, so less builds up at a time. Right-click on the Recycle Bin icon, and choose Properties from the popup menu. You'll see a slider for the percentage of your hard drive the Bin can hog-pull it to the left to decrease the maximum amount. I like setting it to no more than two to three percent.

2) Your Internet cache folders can fill, and then have material deleted at different times, depending on how you've configured your browser. Again, I like setting the maximum size of these folders to a lower-than-default setting.

3) Unlike Windows 3.1, Windows 95 has a dynamic swapfile. This means it increases and decreases the amount of your hard disk depending on how much virtual memory it thinks you need. This can change by quite a large amount, and accounts for much of the ghost hard-drive activity that bothers some users: the swapfile can quickly jump from just 1 MB or so to 20 to 40 MB resulting in very different reports of free drive space.

You can see how it's set up from Control Panel's System icon. Go to the Performance tab, and click on the Virtual Memory button. The default is to let Windows manage the settings, but I like setting a minimum amount of 16 to 24 MB. This way, Windows will only alter the swapfile if it thinks it needs a larger amount, and your reports on free drive space will be much more stable.

Leave the maximum amount setting alone, however, unless you're very short of drive space (and then go out and buy a new drive!) Performance will take a noticeable hit if Windows can't get as big a swapfile as it wants. ♦

- Send Mac-related questions to MacShrink at [MacGuy@tcpon.com](mailto:MacGuy@tcpon.com). All questions become the property of MacShrink and David Rosen.
- Send OS/2 questions to Kevin Linfield at [linfield@torfree.net](mailto:linfield@torfree.net).
- Send PC-related questions to Alan Zisman at [azisman@rogers.wave.ca](mailto:azisman@rogers.wave.ca).

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## Software

### OS/2 ready

continued from page 32

system that is performing so many mission-critical tasks throughout the world.

### The beta files

Lotus will no longer be referring to its SmartSuite product for OS/2 in terms of "years." OS/2 users were embarrassed when SmartSuite 96 for OS/2 came out in December 1996, months after SmartSuite 97 for Windows

was released.

Instead, Lotus will be releasing SmartSuite for OS/2 Warp Version 4. Beta testing has begun (see <http://beta.lotus.com/warbeta> for details) and system requirements are claimed to be at least a Pentium 90 with 32 MB of RAM and lots of hard drive space. Still, no word on a release date yet, and no final word about SmartSuite for Java.

Speaking of beta products, Sundial Systems has released a beta of the next version of Mesa 2 spreadsheet for OS/2. Mesa 2 version 2.2

features enhancements too numerous to mention here and as I type this can be downloaded from [ftp.sundialsystems.com](http://ftp.sundialsystems.com)

Finally, my standard rant: where is Netscape Navigator 4 for OS/2? Promises have been made and deadlines have been missed. One rumour claims it will not be freely available, but will require separate payment to IBM, while one of IBM's Web pages claims an updated version of Netscape 2.02 (yes, the version we're all using now) with better Java support will be available sometime soon.

### Win32 for OS/2?

While not sanctioned by IBM, a group of developers is working on a means of getting 32-bit Windows programs to work under OS/2. The Win32-OS/2 Project (at <http://www.io.com/~timur/win32os2.html>) details a proposed collection of tools and DLLs that allow an end user to convert a Win32 (i.e., Win95/WinNT) program into a native OS/2 program, and then run that program under OS/2 without needing

continued on page 49



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# Mac users pledge allegiance



**Industry  
Insider**

Lee Lester

You have to hand it to Mac fans. During a recent fund drive by Pittsburgh-area public radio station WDUQ at Duquesne University, it received a pledge from a Mac user who offered \$500 if 20 more made pledges by the end of the show.

For the next two hours, the hosts kept urging Mac fans to use their phones. Every pledge break, the name Macintosh was repeated over and over as they reported how many had already pledged money.

The result: the Mac got wads of free publicity, and WDUQ received pledges from the required 20 callers—with a half-hour to spare.

## Nader's raiders target Microsoft

Microsoft has both the U.S. Justice Department and an American consumer group after it for alleged monopolistic practices.

The Consumer Project on Technology, acting on behalf of consumer advocate Ralph Nader, hopes to team up with some of Microsoft's biggest competitors and critics, including Sun Microsystems chief executive officer Scott McNealy and Netscape Communications general counsel Roberta Katz.

## DataGen generating profits

Data General ended a record-breaking year with the highest fiscal year revenues in its 29-year history. It doubled net income from fiscal 1996. And, in its final quarter, ended Sept. 27, it had a US\$17 million net profit with its highest-ever quarterly revenue of US\$404.1 million (versus US\$9.9 million a year earlier, when it had US\$336.2 million).

In fiscal 1997, DataGen made a net profit of US\$55.9 million from its best-ever annual revenue of US\$1.53 billion.

The company, said by International Data Corp. to be the worldwide Windows NT market leader in enterprise-class systems that sell for between US\$50,000 and US\$100,000, has reported increased earnings per share and higher year-over-year revenues for nine consecutive quarters.

## Silicon Graphics chief leaving

Silicon Graphics chairman and chief executive officer, Edward R. McCracken, is stepping down in the wake of falling server sales and a US\$56-million first quarter net loss, up from \$22 million in the same quarter a year ago.

The company will lay off 700 to 1,000 employees—almost 10 percent of its worldwide workforce.

## Gates of hell?

British computer maker ICL claims Microsoft chairman and chief executive officer Bill

Gates grabbed undeserved publicity in a British government proposal to link the nation's schools to the Internet.

British Prime Minister Tony Blair met the world's richest man and announced the  
*continued on page 46*

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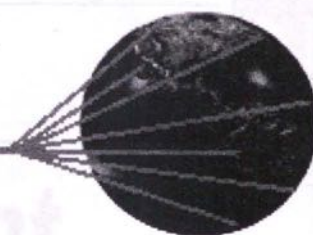
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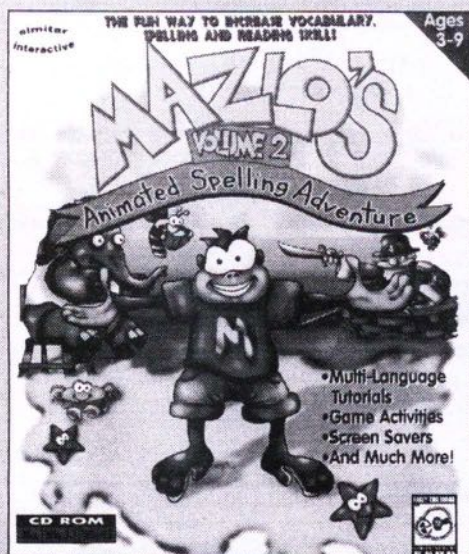
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# UBC releases watershed management software

BY JUNE CAMPBELL

In late September, the Institute for Resources and Environment at the University of British Columbia released Integrated Watershed Management CD-ROM, an electronic textbook designed to accompany off and on campus distributed learning courses or to be used as a guide for professionals and community groups who are interested in watershed management and rehabilitation.

According to research associate, Sandra Brown, the digital format was selected instead of traditional print because of the interactivity that is possible with a CD-ROM, but impossible in a textbook.

"When you're working on an interdisciplinary course that presents a problem-solving approach combining issues from rural, urban, forestry, hydrology, agriculture and ground-water and stream pollution control, you need a format that allows people to interact with the content, to look at different topics in different dimensions," said Brown.

"Textbooks are linear—you move through them from front to back. With a hyperlinked CD-ROM, people can move around at their own pace and at a chosen level of detail. Because it is linked to our World Wide Web

site, users can receive updated information and access other related Web sites. All users have access to Hypernews, our electronic message board, and users registered in the UBC course RMES500b can post messages and interact with instructors and other students."

The gigantic CD-ROM contains case studies, over 700 computer frames, 400 images, graphics, text and searchable references relating to all aspects of watershed management. Over 400 reference titles are accessible and searchable from anywhere on the disc. The audience for the the CD-ROM includes practicing professionals, graduate students, resource managers and planners, regulatory personnel and community groups. The techniques covered are applicable for use in development projects and are pertinent to all those interested in sustainable development, particularly in mountain and headwater areas.

One month after being released, approximately 30 copies have been sold to interested persons and community groups coming from Europe, the United States, Australia, Thailand, New Zealand, Philippines and Mexico. Integrated Watershed Management, which was developed by a team of seven people over a year has received positive feedback from the U.S. Environmental Protection Agency (EPA).

The disc sells for about \$100 and may be ordered from the Institute for Resources and

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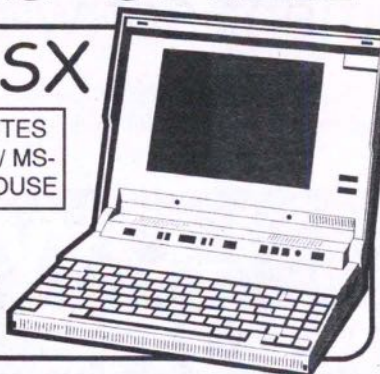
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## Column

# Cluster slack revisited: Here's what I did...



Software

Alan Zisman

Readers regularly send me email in response to things I've written in this column and in the *You Asked Me* answers published in this magazine. In both places, I've mentioned the idea of cluster-waste—and judging by the amount of email I've received, this topic has hit a nerve.

Briefly, because of the way both DOS/Wing5 and Mac file systems store information on hard drives, some space on your drive is inevitably wasted; big drive partitions and lots of small files waste the most, and with the larger hard drives that have become common in the past few years, many users find that 20 to 40 percent of their drive space is wasted by the file system.

Again briefly, as I've explained in past issues, there are a couple of ways to minimize this so-called cluster-slack waste space:

- Move to an operating system with a more modern way of storing files. NT's NTFS or OS/2's HPFS virtually eliminate waste space, if you're prepared to devote your hard drive to those operating systems.
- Use disk compression. Any disk compression system eliminates waste space. DriveSpace 3 (included with the Win95 Plus Pack or the new Win95B version) can be set to a 1:1 compression ratio (i.e. zero compression) to eliminate the performance penalty from continually expanding and compressing files.
- Win95B users can install the FAT32 file system, getting more efficient use of their hard drive in exchange for incompatibility with other operating systems and older disk utilities.
- Create multiple smaller disk partitions rather than a single large one; this doesn't totally eliminate cluster-slack waste, but does cut the amount lost by 50 to 75 percent.

Readers have been asking for the "best" way to repartition their drives... like creating a system of folders (directories) to store data. There's no single right way: different schemes will work for different users.

Here's what I did recently, on one machine. The computer in question is the network server on a classroom network. Its 2 GB hard drive was set as a single FAT 16 partition with a little under 1 GB free space... meaning it used 32KB clusters, and wasted about 30 percent of its space. Because I needed to continue using DOS on this machine and didn't want to use disk compression on a network server, repartitioning was the only option to reduce cluster waste.

I wanted to create four partitions of just under 512 MB... these would use 8KB clusters, cutting waste by about 75 percent.

I was going to dedicate the different partitions to different uses:

- A C: partition for operating system, networking, and programs to be used on the server.
- A partition for games and programs usable across the network.
- A partition for data and individual users' private directories.
- A partition for a backup of a workstation, and installation folders for software used on the workstations.

First, I backed up the data, onto a portable Iomega Ditto tape drive. I installed PowerQuest's Partition Magic software, which allows repartitioning without destroying the existing data. (But back up anyway!) Without that, I would have had to use the DOS FDISK utility, which destroys the existing data and requires reformatting, any time you make changes to a drive's partitions.

Because the drive was more than half full, I couldn't simply use Partition Magic to create the partitions I wanted, instead, I shrank the existing C: partition to about 1.2 GB, and created an extended partition in the remaining space. I then created three logical drives within that partition (Partition Magic creates the partitions and formats them in a single step).

Then, I quit Partition Magic, and using the Windows 3.1 File Manager, moved as much of my existing data as possible from the still-too-big C: drive to the other partitions. (DOS XCOPY or Win95 Explorer are also good ways to do this). Then, back to Partition Magic, to shrink the C: drive to the desired 511 MB, increase the size of the extended partition, and spread the free space out among the other partitions. When I was done, I had 15 MB left over, and used it to make an additional partition.

That did it for the server. Because I had a network, I needed to reset each workstation to recognize the new drives. This didn't take too long, as the network connections are made in a batch file: after changing one, I saved the changed onto a floppy disk, and cut and pasted on each subsequent machine. I didn't let the workstations log onto the new server C: drive, giving me additional security for the server's software (they also don't log onto the little partition I tagged onto the end of the drive, giving me a private little space to store my own data).

As well, by repartitioning, I get more efficient use of the space on the hard drive... in this case, gaining the about 450 MB worth of storage. ♦

Alan Zisman can be reached for comment or questions at [azisman@rogers.wave.ca](mailto:azisman@rogers.wave.ca).





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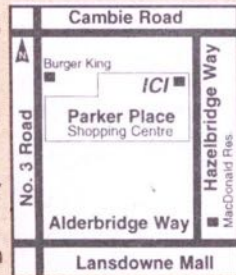
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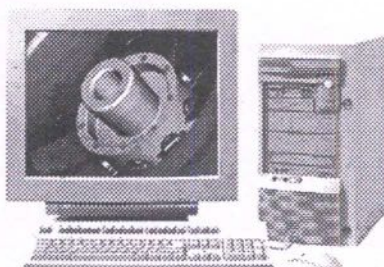
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12.1" TFT color / 10x .....\$4590
- IBM 380ED P150MMX/16M/2.1G20x  
12.1" TFT / Win95.....\$3900
- Hitachi Visionbook 133MX/16M/2.1G/  
8x / 33.6k modem /12.1" TFT .....\$3550

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Intel P5MMX166/200.....\$1420/1550  
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AMD K6MMX166/200....\$1400/1500  
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- (ViewSonic G771/ P775 / P815.....+\$690/850/1900
- (NEC E700 / P750 /P1150.....+\$890/1050/2000
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- Creative 56k voice x2 / K56.....\$120/150

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- FD 1.44 Fujitsu .....\$26
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# Sony and Fujifilm Introduce the mega-floppy disk

COMPILED BY KEVIN LINFIELD

**S**ony and Fujifilm have jointly developed a 200 MB high-capacity 3.5-inch floppy diskette system that is compatible with current 3.5-inch floppies. Titled HiFD, this system features a 3.6 MB/sec transfer rate, versus the current 3.5-inch floppy drive transfer rate of 0.06 MB/sec.

Contact: Call 800-488-3854, or check out <http://www.fujifilm.com>



degrees, and weighs only 600 g. Contact: Call 516-331-2552, or check out <http://www.surfmate.com>

## One for the Swiss army?

Another hot multifunction device is the Okidata OkiOffice 44, a fully integrated machine for printing, faxing, copying, and scanning. Featuring 600 dpi class print resolution via toner-based LED, it has a suggested retail price of \$899.

Contact: Call 905-890-9797 or check out <http://www.okidata.com/products/fax/0044/0044.html>

## Wireless keyboard

US Electronics has introduced the SurfMate Wireless Keyboard for Windows-based PCs. The 79-key keyboard can be used up to 14 meters from your PC at horizontal angles up to 60 degrees and vertical angles of up to 50

## A real head spinner

Todd Enterprises Inc. has announced what it claims is the fastest CD-ROM drive, spinning at an incredible 54X and providing a data transfer rate of 8 MB/sec.

Contact: Call 516-777-8633, or <http://www.toddent.com>

## Microsoft works out

Microsoft has announced the release of Microsoft Works 4.5, which includes an integrated word processor, database, and spreadsheet. New in version 4.5 is Internet browsing, thousands of clip-art images, and 100 new templates. It has a suggested retail price of \$69.95.

Contact: <http://www.microsoft.com>

## Watch out for Pirates

H+A has launched Nikolai's Pirates, the sixth title in the Nikolai's Adventure Series of CD-ROMs for children. Young Nikolai and his toy cat set sail in search of the missing pieces from Captain Blood's treasure map. Along the way, they encounter crafty pirates and challenging activities. It is available for Windows or Mac, for \$29.99.

Contact: Call 416-977-2301, or check out <http://www.nikolai.com>

## What a card

ActionTec Electronics has announced the CameraConnect external PC card and compact flash reader. The CameraConnect attaches to your parallel port and allows PCMCIA type I and II, and CFA cards to be "hot swapped." It has a suggested retail price of US\$149.99.

Contact: Call 408-752-7700, or check out <http://www.actiontec.com>

## The old-programs home

Clarix has announced it will retire six software titles, including some of the original Macintosh software titles. Clarix will cease developing and selling MacPaint, MacWrite II, MacWrite Pro, MacProject Pro, Easy Business Cards, and Clarix OfficeMail as of Jan. 1. Clarix will continue to provide technical support to registered

customers of these products through the end of 1998. Clarix claims ClarixWorks has evolved into a superior product.

Contact: Call 800-544-8554, ext. 1650, or check out <http://www.clarix.com/retire>

## Exploring other systems

Microsoft Canada has announced availability of preview copies of Microsoft Internet Explorer 4.0 for Sun Solaris and Windows 3.1 operating systems. These releases join the existing preview release for Macintosh and the final version of Internet Explorer 4.0 for Windows 95 and the Windows NT operating system.

Contact: Download a preview from <http://www.microsoft.com/ie>

## Another Pentium bug

A serious bug has been found with Intel's Pentium (and Pentium MMX) processors that can cause the computer to freeze. Intel claims users are not likely to encounter the problem in everyday use and that a programmer would have to intentionally issue a specific command to freeze the PC's operation. A software patch is being worked on and will be freely distributed.

Contact: Point your browser at <http://www.intel.com>

continued on page 46

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HP 8X/24X/48X EIDE INT/EXT CD WRITER	\$528/638
PANASONIC 8X/24X/48X CDROM RECORDER	\$795
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SYJET EXT. 1.5GB REMOVABLE HDD	\$498
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## News briefs

### News

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### Hot Web Sites

Canadian news is a priority for CNEWS, the new online news destination.

<http://www.canoe.ca>

Childproofers has produced a new and definitive child-safety Web site called Safe @ Home.

<http://www.safebaby.net>



The Royal Bank has produced a new Web page to help tackle the Year 2000 date problem featuring tips, tricks, and many hot links.

<http://www.year2000.com>

For all the news that may or

may not be fit to print, check out the *National Enquirer* home page.

<http://www.nationalenquirer.com>

Macintosh consumers should check out the Macseek Web site, containing a daily summary of Macintosh news, a message centre, reviews, and tips.

<http://www.macseek.com>

### Industry insider

continued from page 39

creation of a "National Grid for Learning" scheme.

Gates then declared he was delighted Microsoft had helped "to shape some of the fundamental strategic thinking behind making technology an integral part of every aspect of British life."

But ICL claimed the National Grid was its big idea. *The London Daily Telegraph* reported ICL managing director, David Wimpers, as saying: "Mr. Gates rode into town and seemed to pick up all the bouquets. The PR thunder was stolen from us. Frankly, we felt pretty miffed."

Microsoft, which is donating US \$150 million, denies Gates tried to hijack the initiative.

### Up by the Bay

Bay Networks made a record profit in its first quarter. Revenue jumped to an unprecedented US\$601.3 million, up 15 percent from 12 months earlier, as net income reached US\$41.3 million versus US\$5.6 million.

But Bay expects to do even better thanks to a simple idea that basically combines a router with a switch. Until now, the two products had to be bought separately.

But Bay says its Accelar routing switches can be sold for the price of only a switch and the development gives it a commanding lead as the next-generation local area network market rises to \$9.5 billion by 2000. It is also confident it can grab a big chunk of cable-modem sales as companies, such as Rogers in Canada, extend service to customers.

### Open Text raises the standard

Waterloo, Ont.-based Open Text scored a big one when the Standards Council of Canada chose its Livelink intranet for its online operations. Livelink will manage workflows for hundreds of standards committees and streamline the Canadian companies' contributions to international standards.

Open Text scored an even bigger one when the general secretariat of the International Organization for Standardization also picked the software for a global extranet to speed development of more than 1,000 standards a year.

But first quarter results, despite the highest-ever revenue of US\$7.7 million, up 90 percent from a year earlier, still showed a \$3.6-million net loss. Chief executive officer Tom Jenkins blamed the traditionally tough quarter.

### Jet propelled

Ottawa-based electronic forms and enterprise workflow software developer Jetform has been named by Dataquest researchers as the second largest vendor, with 15.4 percent of the enterprise workflow market, up from 6.1 per cent in 12 months.

And president and chief executive officer, John Kelly, who took the company from sales of \$1 million a year to \$77 million, was named Ontario's Master Entrepreneur of the Year. Kelly projects Jetform will reach \$200 million by 2000.

And, making the corporate smile even wider, the company announced record first quarter revenue of \$23.6 million, up 58 percent from last year. Net profit of \$957,000 replaced a \$45.9 million loss 12 months earlier.

Lee Lester may hold shares in companies mentioned in this column.

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# The cookie, the cart, and the screwdriver



**Mac  
Rant**

David Rosen

For three days before The Announcement, the only thing on Apple's Web site were pictures of a cookie, a shopping cart, and a screwdriver. Then Apple told us what was on its mind.

## The cookie

Apple has announced a new series of computers called the Power Macintosh G3 series. Based on the third-generation PowerPC G3 processor from IBM and Motorola, the new Apple designs include many technical advancements, speeding things up, lowering overall costs, and adding more features. Apple also claims that the G3 series will simplify the Mac product line, paving the way for a future product streamlining—something that's long overdue. By the time you read this, Apple says all four of the G3 systems should be available in stores.

- The Power Macintosh G3 at \$2,899 is a 233 MHz, 32 MB RAM desktop computer that supports up to 192 MB of RAM. It comes with a 4 GB hard drive; a 24X CD-ROM drive (maximum speed); 2 MB of Video SGRAM, and 512KB of Level-2 backside cache.
- The Power Macintosh G3 at \$3,499 is a 266 MHz, 32 MB RAM desktop computer that supports up to 192 MB of RAM. It comes with a 4 GB hard drive; a 24X CD-ROM drive (maximum speed); an internal 100 MB Iomega Zip drive; 2 MB of Video SGRAM, and 512KB of Level-2 backside cache.
- The Power Macintosh G3 at \$4,399 is a 266 MHz, 32 MB RAM mini-tower computer that supports up to 384 MB of RAM. It comes with a 6 GB hard drive; a 24X CD-ROM drive (maximum speed); an internal 100 MB Iomega Zip drive; 2 MB of Video SGRAM, and 512KB of Level-2 backside cache.
- The PowerBook G3 at \$8,199 is a 250 MHz, 32 MB RAM notebook computer that supports up to 160 MB of RAM. It comes with a 5 GB hard drive; a 20X CD-ROM drive (maximum speed); a 12.1-inch active-matrix SVGA color display, and 512KB of Level-2 backside cache.

And the cookie tie in? Well, it's all got to do with the new chips, Dear Readers. You see, it's a chocolate chip cookie. Get it? Sigh.

## The cart

Thankfully, the cart icon was less esoteric. Customers in the United States can now buy Macs directly from Apple via the Internet. That's right, Apple has re-opened its online store and is currently selling computers from its Web page (<http://www.apple.com>). Canadian customers, however, will have to wait a few more months before they are able to buy Macs online.

"Apple's Internet commerce efforts are

designed to address customer demand to buy directly from Apple and to be able to order specific configurations. It is not a way

to compete with our current distribution channels, but a means to complement them," says Steve Jobs, Apple's interim chief execu-

tive officer and Keeper of the Sacred Kool-Aid Mixing Spoon in a prepared statement.

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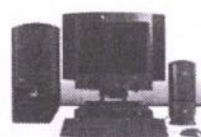
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# Varied past perfect for consulting career

BY JUNE CAMPBELL

What do you do when you have three diverse skill sets and want to find a career that lets you use them all? For Anne Coulombe of Sciplan Systems Inc., the answer was to become a consultant, helping businesses grow through the use of technology.

"It takes three distinct skills to successfully manage a business in the '90s: business acumen, marketing know-how, and an understanding of the use of technology," says Coulombe, "and that combination is rarely found in one person."

Originally from Ottawa and Quebec City, she obtained a bachelor of arts degree in industrial relations from Laval University in 1985. Next came a degree in computer science from University of Quebec at Trois Rivières in 1987, followed by an masters of business administration in technology engineering management from City University in Seattle in 1995.

In Vancouver, Coulombe worked for Consumer Software Inc. until it was bought by Microsoft. She remained with Microsoft

as a program manager, rotating between hard core technology (building email gateways), and the marketing specialization.

After several years, Coulombe moved to Electronic Arts Canada as director of technology, where she wanted to link online interactive entertainment with the communication infrastructure, a procedure that had not yet been implemented by Microsoft.

As director of technology, Coulombe was one of only four women in North America to reach that level in a company. In 1995, self-employment beckoned.

Coulombe took some time out to talk about her varied high-technology career path with *Computer Player!* contributor, June Campbell.

**Computer Player!:** What made you focus on technology?

**Anne Coulombe:** I was working in HR [human resources] for the provincial govern-

I had never programmed. But I did surprisingly well after being told by the dean that I was going to flunk because I didn't have the prerequisites (math), and that women didn't do this sort of thing.

Anne Coulombe, Sciplan Systems

ment of Quebec in 1985 when I asked myself what would influence companies the most over the next 10 years. The answer was computers.

**CP!:** Did you have a computer background?

**AC:** Minimal. I had never programmed. But

I did surprisingly well after being told by the dean that I was going to flunk because I didn't have the prerequisites (math), and that women didn't do this sort of thing. I finished near the top of my class and went into the industry full time. I've been working in a male dominated universe for a long time.

**CP!:** What's your business focus now?

**AC:** I'm focusing on a newly emerging industry: agricultural use of technology. That covers everything from control systems to running business more efficiently to figuring out the real cost of doing business. It includes Web sites and email and production tools,

and linking all that together effectively. Not all agriculturists and horticulturists are ready to use technology. My goal is to bring the whole industry up to speed with tools that are being used elsewhere. It's very important that they use technology as a tool, not as a toy. I never suggest that they overbuy.

**CP!:** Who are your clients?

**AC:** Two that come to mind are Brookside Orchid Garden in Langley and the United Flower Growers Cooperative (UFG) in Burnaby. With Brookside Orchid Garden, I helped them use technology to figure out the cost of doing business, to track production data, and to market their products to international buyers.

With UFG, I'm the project manager for the technology component of a large expansion that is underway. UFG is the industry auction market place for growers and buyers of potted and cut flowers. They gross over \$40 million a year; it's the largest Dutch-clock style auction outside of Holland.

**Branching out**

**CP!:** What other types of services do you provide?

## Animator in a strange land

BY PAUL LIMA

Like many animators, Bruce Buckley is a stranger to movie goers, but his work isn't. While he's not on the screen, his computer-generated animation work is.

The Hamilton, Ont., native is also living in a strange land, the United States. But that's where he and thousands of other Canadian animators have to live if they want to ply their computer-generated animation (CGA) trade.

Buckley has been working for Walt Disney Studios for almost three years and he is currently working on *Dinosaur*, a CGA movie set in the late Jurassic period. The film involves live-action backgrounds and computer-generated creatures, such as dinosaurs and lemurs.

As lead creature modeller on the movie, Buckley is responsible for the creation of the 3D dinosaurs, virtual sets and props, and controls that will enable the dinosaurs to talk.

Buckley, who studied photography at Sheridan College in Ontario, worked as a freelance photographer and a photographic technician with the provincial government while taking night-school courses in film studies, television production, and computers.

He was introduced to rudimentary computer-generated imagery (CGI) while working for the government. "This new medium

intrigued me," Buckley says. So intrigued was he that, in 1987, he quit his job and went back to school at Seneca College, where he studied computer graphics and technical illustration.

**Beyond buttons**

"The lab they had at the time was state of the art and I knew this was for me." The foundation at Seneca was not how to push buttons on software packages, but rather how to create visuals. "The emphasis was on communication, not the tool," he says.

After graduating, he started an independent CGI company. He and two partners invested in a Silicon Graphic 4D20 workstation and software from Alias Communications, but they were slightly ahead of their time. The move did not pan out, as few companies were taking advantage of CGI in design and advertising.

The experience earned him a job with Alias, where he began working with designers to create toys, running shoes, glassware, tires, and cars on computer. While there, he started to sculpt creatures "using 3D algorithms as digital clay" and found himself on the leading edge of the burgeoning CGI and CGA industry.

Suddenly, Buckley's skills were in demand in the United States. Sonalysts, a Connecticut-based company, recruited him to work as a senior computer animator. Then Industrial Light and Magic (ILM) came calling.

ILM already employed several other Canucks, including Steve Williams of *Star Wars* fame, and the offer was a dream come true. So, Buckley loaded up his car and moved to San Raphael, Calif., where he worked for 11 months on *Casper*, the first feature animation generated totally on computer.

He then built Draco the Dragon in the movie *Dragonheart*, did some *Stars Wars*, tests and worked on *Congo*.

**The Disney dream**

Disney offered him a job working on the *Dinosaur* project and he had to say yes. "This is for me the greatest challenge yet, to create computer-generated animated creatures for the best animation company in the world."

Most of the artists at Disney are there because of the projects they get to work on, he says. "We studied hard and long to perfect our craft and we are excited about what we are doing at Disney."

Working at Disney has

also given Buckley the opportunity to work with talented artists from England, Ireland, Italy, Spain, China, Japan, India, and, of course, the United States. "Sometimes Disney feels as multicultural as Canada. Everyone has a voice, and the individual backgrounds add to the creative spirit."

Buckley left Canada because companies here were only doing effects work, not full 3D animation for entire films. Now Disney has set up a direct-to-video animation studio in Toronto and "the scene is looking brighter," but Buckley is not sure he would come home now.

"Disney has been good to me and has encouraged me to grow artistically." They have sponsored an art show for him and are sponsoring another show early in 1998. As well as things are going, though, there are times, Buckley confesses, he and his wife, Ruth, "miss the four seasons."

Perhaps if the Canadian CGA industry matures, Buckley may find himself back here-throwing snow balls in the winter and raking leaves in the fall. Until then, he is content to be a stranger plying his trade in a strange land. ♦





**AC:** Another facet of my business is grant application and SR&SED (scientific research and engineering development). I help clients with federal tax credits and with the maximization of grant applications.

**CP!:** Where is technology heading?

**AC:** People aren't exploiting technology to

meet their needs. Technology has to remember that the user is king. Unless we make the user interface easy to use, people won't want it. Technology developers must give the users what they need and want.

**CP!:** Why did you relocate to B.C.? Was it because of the thriving technology industry

here?

**AC:** It was for the good skiing. But I stayed because of the technology, and because I can effectively work to almost any time-zone from Vancouver by either getting up early or staying up a bit later.

**CP!:** What would you tell young people?

**AC:** That it's hard work, but extremely rewarding. We're molding an industry right now. ♦

**Site seeing:**

Sciplan Systems Inc., <http://www.sciplan.com>  
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## OS/2

continued from page 38

Windows or Win-OS/2 support installed. Screen shots are available, but no word on code availability yet. Definitely looks promising, and I'll be sure to report any significant progress, as I would love to run some of my necessary Windows 95 programs under OS/2.

## Freeware of the month

Most computer users who use multiple operating systems have minor problems transferring files between them if they use each operating system's native file system. Now, OS/2 users can access programs and files on Windows NT's file system (NTFS). The freeware program NTFS-OS2 currently allows the user read-access to NTFS partitions, and the author claims that if there is sufficient interest, he will add write-access also.

Grab your copy from [ftp://ftp-os2.nmsu.edu/pub/os2/system/drivers/filesys/ntsf\\_001.zip](ftp://ftp-os2.nmsu.edu/pub/os2/system/drivers/filesys/ntsf_001.zip) and let the author know if you want write access added. ♦

Kevin Linfield is a Toronto-based consultant and freelance writer. He can be reached via email at [linfield@idirect.com](mailto:linfield@idirect.com)

## MacRant

continued from page 47

Maybe so, but industry wags suggest there may be another reason behind the Apple's direct approach. A few weeks ago, wonder kid Michael Dell was asked what he would do if he ran Apple. After thinking for a moment, Dell replied something along the lines of, "I'd close it down, sell everything off, and give the shareholders their money back." Perhaps the bull's eye over Dell's cherubic face that flashed on the screen during The Announcement was more than a simple A/V error? Could it be that when Jobs looked up at the bull's-eyed Dell and cried out, "We're coming after you, buddy!" he wasn't just talking about Apple's current market share?

## The screwdriver

No, it's not what you might be thinking. The screwdriver icon represents the company's new build-to-order distribution model, making Apple the only computer company to sell all its products through retail stores, resellers, and the Internet. The coolest part about the store is its use of WebObjects, a technology developed by Next Software Inc., the company founded by Jobs and acquired by Apple in January. WebObjects was used to build Dell Computer's original online store. Oh, the irony! ♦

Having a Kool-Aid flashback? Send your news to [MacGuy@tcpon.com](mailto:MacGuy@tcpon.com). Please note that due to the volume of mail, individual questions cannot be answered.

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# "Perfect evening" but imperfect earnings

BY CHRISTOPHER GULY

The Christmas gifts Corel chief executive officer Michael Cowpland would like to see on many wish lists undoubtedly include a video-enabled network computer, with some graphics thrown in for good measure. Given some tough financial news this year—including the US\$32-million loss reported at the end of the third quarter for Corel—Canada's software giant is counting on his own Yuletide gift: a better 1998.

To that end, Cowpland is banking on past successes and future possibilities.

The Video Network Computer (VNC), recently released by Corel's subsidiary, Corel Computer Corp., positions the Ottawa-based company at the starting gate of the NC market. Furthermore, its VNC, which sells between US\$700 and US\$1,000 depending on the model, taps into Corel's revised Java strategy, called Conexus.

## Standing out

Instead of creating Java software suites for individual PC use—Corel's original plan—

Conexus will reside on a central server, which the VNC can access. Furthermore, the fact that Corel's NC comes with videoconferencing capabilities makes it unique in the marketplace and can only help position Corel as a frontrunner, says Amy Wohl, a high-tech analyst based in Narberth, Penn.

"They're the only company that has combined a network computer with application software on a server," she says. "Maybe they can make their play out of that combination."

But while Corel has jumped on the NC bandwagon, the company is quick to reinforce its loyalty to its eight-year-old "critical flagship," says Corel's newly appointed senior vice-president of sales, Don Sylvester.

The fact that Corel's NC comes with videoconferencing capabilities makes it unique in the marketplace, and can only help position Corel as a frontrunner.

Amy Wohl

"The graphics side of our business is the five-star foundation of our business."

With a 75 to 80 percent global market share in the number of illustration software units shipped using the Windows system, it's no wonder Corel isn't about to abandon its CorelDraw product line—witness the recent launch of CorelDraw 8, with a new Mac version set for release in February.

Corel's graphics business also gives the company a chance to share some of the glitz displayed by

Cowpland and his flamboyant lifestyle.

## The perfect evening

At October's end, Corel held "The Perfect Evening," which officially launched CorelDraw 8 and awarded US\$3 million in

cash and prizes to winners of the company's annual graphics design contest.

This year's US \$250,000 "Best of Show" winner was Hans Joachim Kardinal of Berlin, who was recognized by about 80 judges—including the editor of this newspaper, Mara Gulens—for his design depicting Orvieto, a small village in Italy's Umbria region.

As overwhelmed as Kardinal was in accepting his award in halting English, the German artist couldn't avoid being overshadowed by Corel's real draw of the evening: Cowpland's wife Marlen and her \$10,000 silver lamé dress. Transparent on most of the right side, the outfit revealed quite a bit of Mrs. Cowpland—much to the delight of paparazzi-like local news photographers.

Perhaps even more revealing was the woman wearing the dress. Although Corel gala fans will have to wait until early 1999 before ogling Marlen Cowpland and her next fashion creation, the Corel boss's wife revealed her own wish for next year.

Maybe, she opined, if the stock in her husband's company rises, "he'll buy me the other half of the dress." ♦

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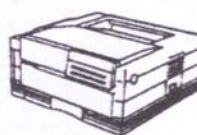
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# Lotus brews suite Java

BY MARC DACEY

On Nov. 5, Lotus Development Canada announced the worldwide launch of eSuite, its collection of small, Java-based applications designed to run on the new generation of servers and network computers (NCs), as well as over existing networked PCs.

The concept represents a significant shift in the direction of "network-centric" management of corporate computing, which until now has been dominated by large, multiple-

application "office suites" such as Corel's Perfect Office, Microsoft Office 97, and Lotus's own Smart Suite 97.

Lotus's eSuite, formerly known as Kona, utilizes 100 percent Java code in its multiple "applets" to run on a variety of platforms and processors, including Intel-based processors, PowerPC chips, and various higher-end chips and platforms in common use in medium- to large-sized companies. According to Kevin Cavanaugh, vice-president of international product development, who addressed a large contingent of press, the idea behind eSuite is

"to reduce the total cost of ownership" of software in large organizations by reducing the cost of managing unwieldy suites of office software, much of which currently sits idle and unused on multiple desktop computers.

## Open up

Using open standards, such as Java, TCP/IP, and HTML, eSuite is said to deliver over an office network only the functionality needed in customizable applets. The eSuite software, scheduled for official release in its various iteration between December and first quarter 1998, comes in two packages: eSuite

Workplace, comprising attractive and uncluttered business-productivity applets, email and Web browser-based search tools, and terminal emulation options, is estimated to retail for \$69; eSuite DevPack is a set of Internet- and intranet-based development tools designed to enable IT managers to easily create server-based, fully customizable applets that can be deployed to any platform capable of supporting Java Virtual Machine (JVM). The eSuite DevPack is estimated to retail for \$1,900. Lotus announced that eSuite will be available in 21 languages. ♦

# Windows squeeze coming?

BY JACQUES SURVEYER

Despite being nearly a year from release, Windows NT 5 was the star of this fall's Professional Developers Conference (PDC) in San Diego.

The NT5 numbers are staggering—27 million lines of code, 400 testers, a compile and link that takes a 500 MHz DEC Alpha machine with 1 GB of RAM eight hours to complete. And the feature set for NT5 is rich:

active directories, Intelli-mirroring for user desktop backups, Cedar and Thor for legacy system connections, and Kerberos security are just a sample.

The buzz at the show concerned exactly which features would be in the NT5 first beta CD-ROM being handed out at the end of the conference. One set of NT5 features Microsoft took great pains to emphasize was all the Windows 98 upgrades and enhancements. Vice-president Paul Maritz and NT5

project director Jim Allchin mentioned that fact more than once.

## WinCE: the unfortunate acronym

Several sessions at PDC emphasized Windows CE, the compact version of Windows initially targeted for palmtop computers. WinCE is a complete rewrite of the Windows operating system for palmtop and other small applications. Compaq was doing a boom business selling its WinCE palmtops

to just about every one of PDC's 6,000 attendees. Clearly, WinCE is on the fast track to get the core features of Win95 and Win98.

Come midsummer 1998, Microsoft has a tough choice to make. Win98 is due to be introduced at that time. Windows NT 5 should also be nearing completion. The question is whether NT5 will have enough features to replace Win95 and Win98 completely. ♦

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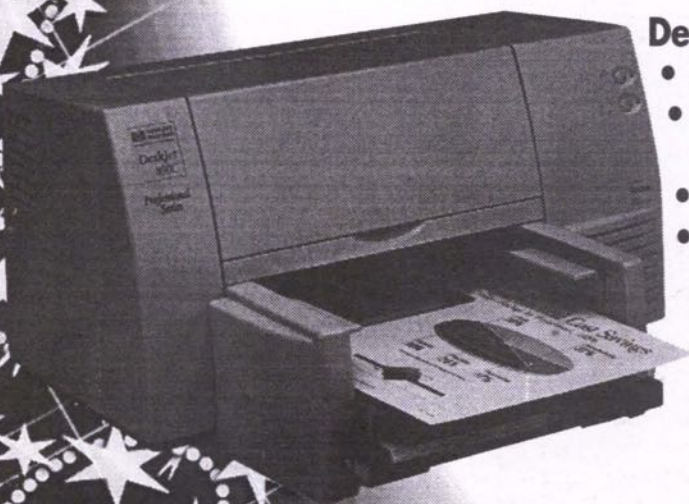


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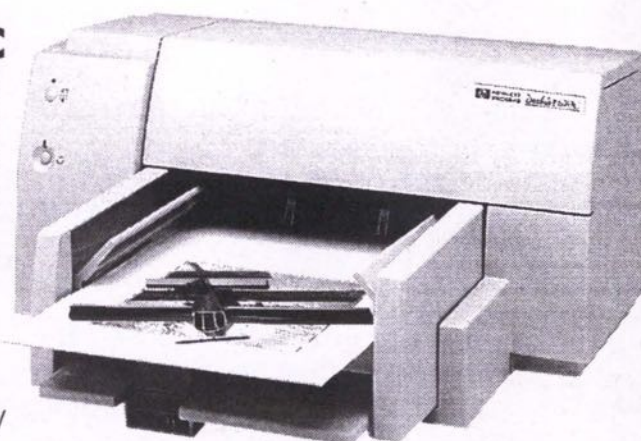
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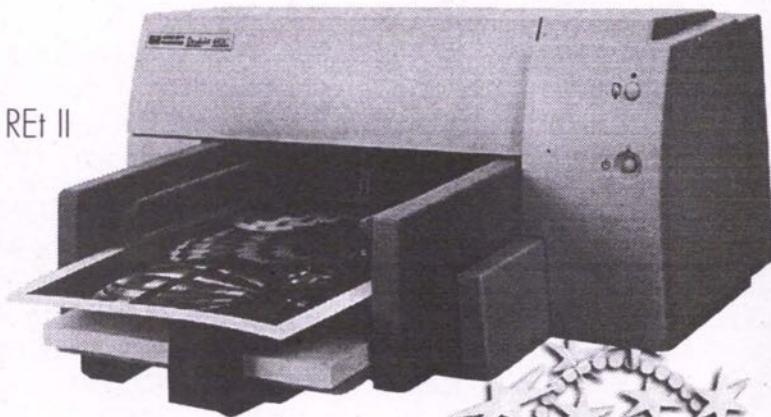
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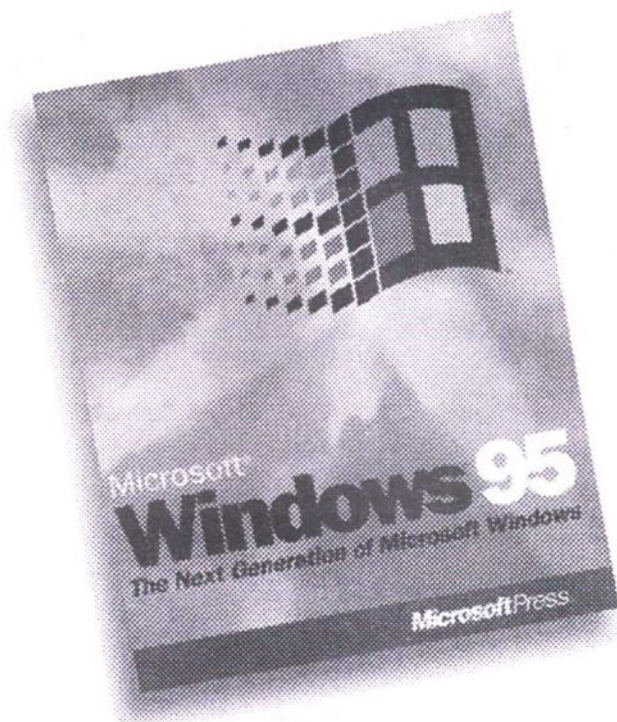
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# DOS VS Windows

作者：林啓清



## 一、前言

DOS這個名詞好像已經很久了？因為許多用電腦的人都不知道有這樣的東西了？

許多自認爲電腦高手更會斬釘截鐵的告訴您DOS已死？

事實上，DOS在個人電腦上所擔任的工作，大多數的人都不清楚，也不知道它的重要性？

身在加拿大，相信您的電腦裡面一定有裝微軟所出的Windows操作系統？但是您的電腦裡面有沒有DOS，大部份的人就都不知道了？

一些老電腦人（並不代表年紀大，而指用電腦的時間）會告誡電腦新鮮人，要學學DOS哦……要不然電腦出問題的話……那就麻煩了？

Windows對個人電腦界的貢獻是有目共睹的，但它也培育了更多的電腦白癡？

值得大家想想的是，是否大家都要變成「電腦專家」？答案當然是否定的。

當電腦白癡並沒有什麼不好？但是當白癡也有分級，也就是「白」到什麼程度？

越白就越沒有行為能力，當對電腦做出不該做的事，後果就會更嚴重？

所以，筆者認爲當電腦白癡沒啥不好，但是建議不要當純白的那種……（-）

## 二、何謂DOS

DOS的全文是Disk Operating System。由字面上看，可以猜出那是一種跟磁碟有關的東西？問題什麼是磁碟呢？

軟式磁碟機（讀Floppy那部機器）跟硬式磁碟機（HardDisk）都是屬於磁碟，只是外型有點不同，而大部份人比較容易見到磁碟片，硬碟由於裝在電腦內部，反而容易被忽視了？

換句話說，如果沒有DOS這種東西，我們就沒有辦法讀取軟式磁碟機及硬式磁碟機？

當一部電腦上的磁碟機我們沒有辦法存取，那我們要那部電腦做什麼？

以目前的Windows爲例，Windows的主系統一定是裝在硬碟（因爲太大了，沒辦法存在軟碟上面），一旦硬碟無法存取，不要說從硬碟執行Windows，您連把Windows裝在硬碟上都有問題？

寫到這裡，聰明的讀者一定已經猜到，原來DOS這麼重要呀？

沒錯，DOS是非重要的，沒有了DOS您連開機都會有問題，更別想Windows了？

而DOS除了一大堆的外部命令（程式）及內部命令，最主要的工作是讓您的電腦開機。而開機的目的，就是在載入DOS，讓我們能存取磁碟機。

DOS有三個很重要的檔案，分別是IO.SYS、MSDOS.SYS、COMMAND.COM三個檔。除了COMMAND.COM可以讓您看到之外，另外兩個檔都是隱藏檔，必須用特別的方法才可以而COMMAND.COM就很容易被所謂的電腦白癡所誤殺，一旦誤殺就不能順利開機了？

由於篇幅的關係，筆者並不打算在這邊講解DOS的詳細原理，而是提醒各位，DOS不死，因爲您永遠需要它……（-）

萬一，您真的不小心殺了COMMAND.COM，那只要用DOS開機片開機，開完機後，把在A:磁碟機上的COMMAND.COM拷貝到C:的根目錄（C:\）就可以了。

PS. 磁片上的COMMAND.COM的版本必須跟原來C:裡面的一樣才可以。

## 三、Windows 95的迷思

看了上段，相信有人會質疑，他們用Windows 95已經很久了，但是從來就沒有看到DOS的字樣，筆者怎麼會暗示Windows需要DOS呢？

其實，這是微軟的詭計嘛……如果還讓您們看到DOS的字樣，您們怎麼會乖乖的用那個速度慢又當機的「東西」呢？

DOS的版本只出到6.x版，而

Windows 95所用的是7.x版的DOS，但是並不顯示DOS的字樣，事實上DOS一直沒離開過您？

由於DOS是使用FAT16（一種檔案配置的方法），所以只能控制到2GB左右的硬碟，一旦大於這個容量，就得把硬碟虛擬分割爲兩塊。

現在您知道爲什麼您的3.5GB的硬碟要被分割爲C:跟D:了吧！

至於有人的Windows 95卻可以讓大於2GB的硬碟不需要分割，而能整部拿來用，是否就會很奇怪了？

這一點都不奇怪？因爲在設計DOS那個時代，根本就沒有想到現代人會這麼瘋狂，用到超過2GB的容量（這都是拜Windows之賜），預留2GB的控制能力，已經是夠有遠見了？

既然不行，爲什麼現在Windows還是在DOS的控制下，卻能控制超過2GB的硬碟呢？這一點都不奇怪，因爲微軟把以前Windows 95所用的DOS 7.0加以修改，將原來的FAT16擴充爲FAT32，然後推出一個Windows OSR2版。

所以，如果您的Windows 95可以控制到超過2GB以上的硬碟，那表示您所用的Windows 95是OSR2版的，也就是A版的。

至於不管是A版還是B版（OSR2），LOGO都是一樣Windows 95，所以如果沒有到Windows中的系統去查看，很難就畫面來判斷是A版或是B版？

但是，請記得一件事，當您採用了FAT32後，如果您用以前Windows 95的開機片來開機，您會找不到硬碟的資料。因爲FAT16跟FAT32是完全不相容的？

不管Windows 95怎麼變，都是要先載入DOS，然後才能載入Windows？

除非您用的是Windows-NT，NT可以不

用DOS，並不代表它不需要DOS，而是NT把原來DOS負責的部份給寫到了NT的主系統裡面了。但也由於是這樣，當您用一般的DOS開機，您一樣會找不到NT所規劃出來的硬碟（除非您是用FAT16格式）。

## 四、結語

Windows很慢（跟以前的DOS時代比起來），它很爛（當機）但是大家卻逃不出它的魔掌。由於Windows慢，逼得大家得用更快的硬體，硬體廠商也因爲這樣大發利市。大部份的電腦相關行業都因爲微軟的Windows而受惠，但是可憐的消費者卻要一直掏腰包買新硬體去配合那越來越慢的軟體……；Q

而新的好軟體無法生存，因爲會被微軟消滅，消滅不了的就併購，只要微軟沒有一個真正的競爭對手，我們就得繼續當我們的電腦白癡……）

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## 知多一點點 (一)

### 什麼是統一碼？

中文字在電腦內，每個字都必須有一個內碼來代表。目前，繁體字多數採用台灣所定的大五碼為標準。而簡體字則以中國大陸所定的國家標準碼（簡稱國標碼或GB）為中文電腦內碼。近年來微軟（Microsoft）深感到每種語言皆有不同標準內碼的不便，因為微軟每出一套新的軟體或視窗系統，便需要考慮到各種語言的版本。西方語言多為拼音組合，一個內碼只占一個byte（最高可容納256個字母），而東方語言如中文，則有兩萬多字，一個內碼需佔兩個byte。所以我們常稱中文在電腦上為雙字節字。為解決開發各種語言版本的不便，微軟統一了全世界所有語言的電腦內碼，這就是所謂的統一碼，又稱為Unicode。

### 統一碼的優點：

相信許多在英文視窗上使用過中文系統的人，都體會過雙字節在英文軟體上使用的不便。由於英文視窗在設計上並沒有考慮到雙字節內碼的使用，目前所有的中文視窗系統，必須自行處理所有中文的顯示，印表，及特殊變化。有些應用軟體在使用這些中文時，或多或少會有一定問題。如中文字的

間距在螢幕上顯示不正確，或受到英文的自動修字功能影響，將中文字改掉，又或是印表時，中文字無法正確列印等等。而新一代的微軟軟體，如Microsoft，或Windows NT 4.0等，皆能直接支援統一碼。在這些軟體內用統一碼輸入中文時，所有的中文將和英文字一樣，以單字節的方式顯示。而且不會受到自動更錯的影響。所有英文軟體所提供的功能及特殊效果，皆能直接使用。再也不用擔心自動換行中文切字的問題。

### 統一碼的缺點：

目前軟體能支援統一碼的還不多，且大部份中文系統只能支援大五碼和國標碼。如果你的文件是用統一碼所寫成的，除非對方的中文系統也能支援統一碼才可閱讀你的文件。部份印表機尚無法支援統一碼，請用大五碼中文輸入。

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The Unicode Worldwide Character Standard is a character coding system designed to support the interchange, processing, and display of the written texts of the diverse languages of the modern world. In addition, it supports classical and historical texts of many written languages.

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### Chinese Gateway



is the first 32-bit Chinese Interface for Windows NT, 95 and 3.1. You can read, write and print Chinese characters from Internet and any Windows application supporting Unicode, Big5, or GB codes.

This information about Unicode is quoted from the Internet. Search for "Unicode".

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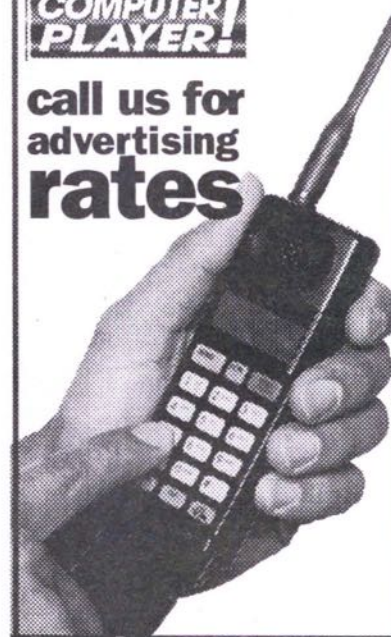
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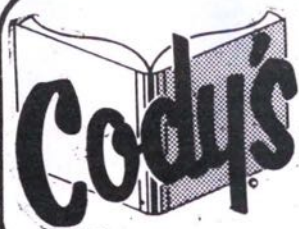
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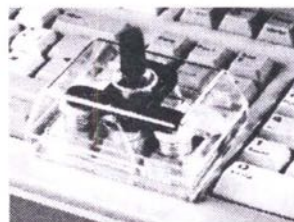
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### Faronics Fall Feature

#### Faronics 5150M16

- Intel VX Chipset MMX Mainboard 256K Cache
- Intel Pentium 150 CPU
- 1.7GB Maxtor Ultra IDE Hard Drive
- 16 MB EDO RAM
- 8X CD-ROM, 32 bit
- 1.44MB Floppy Drive
- Cirrus Logic 5446 Video Card w/Software MPEG
- 3D Surround Sound Card
- Speakers
- Enhanced Windows 95 Keyboard
- Mouse with Mouse Pad
- Flash Rom Bios
- Enhanced IDE Controller, Mode 4
- 2 High Speed Serial Ports
- Enhanced Parallel Port
- Faronics Mini-Tower Case, CSA Approved Power Supply

**Feature Price:**  
**\$699.00**

#### Possible Additions:

- 14" SVGA Monitor, NI, 28dpi, 3 year Warranty .....\$189
- Jaton 33.6 Data Fax Modem \*Made in U.S.A. ....\$79
- Microsoft Windows 95 w/CD & Manual .....\$129
- Lotus SmartSuite .....\$39
- Norton Anti-Virus .....\$39
- Gravis Multiplayer Game System ....\$39

### Faronics Family System

#### Faronics 5166MMX16

- PA-2007 1MB Cache MMX Motherboard
- Intel Pentium 166 MMX CPU
- 2.4GB Maxtor Ultra IDE Hard Drive
- 16MB EDO RAM
- 24X CD-ROM, 32Bit
- 1.44MB Floppy Drive
- 2MB Cirrus Logic 5446 Video Card PCI
- Jaton 33.6 Data Fax Modem PnP \*Made in U.S.A.
- 3D Surround Sound Card
- Labtec LCS-1014 Speakers
- Enhanced Windows 95 Keyboard
- Microsoft Mouse with Mouse Pad
- Flash Rom Bios
- Ultra DMA IDE Controller, Mode 4
- 2 High Speed Serial Ports
- Enhanced Parallel Port
- Faronics Mini-Tower Case, CSA Approved Power Supply
- INCLUDES:**
- 15" KTX SVGA Monitor, NI, Low Rad, 28dpi
- ALSO INCLUDES:**
- Microsoft Windows 95 OSR2; Pre-Installed with CD & Manual
- Microsoft Works, Microsoft Encarta 98, Microsoft Cinemania 97, Microsoft Golf, Microsoft Money, Microsoft 3D Movie Maker, Microsoft Game Sampler
- Lotus SmartSuite: Word Pro, Lotus 1-2-3, Organizer, Freelance, Approach, Screen Cam
- Norton Anti-Virus

**\$1699.00**

### Faronics Performer System

#### Faronics 5200MMX32

- PA-2007 1MB Cache MMX Motherboard
- Intel Pentium 200 MHz MMX CPU
- 3.2GB Maxtor Ultra IDE Hard Drive
- 32MB EDO RAM
- 24X CD-ROM Drive, 32Bit
- 1.44MB Floppy Drive
- 2MB Cirrus Logic 5446 Video Card PCI
- U.S. Robotics 33.6 Data Fax Modem PnP
- 3D Surround Sound Card
- Labtec LCS-1224 Speakers
- Enhanced Windows 95 Keyboard
- Microsoft Mouse with Mouse Pad
- Flash Rom Bios
- Ultra DMA IDE Controller, Mode 4
- 2 High Speed Serial Ports
- Enhanced Parallel Port
- Faronics Mid-Tower Case, CSA Approved Power Supply
- INCLUDES:**
- 15" KTX SVGA Monitor, NI, Low Rad, OSD, 28dpi
- ALSO INCLUDES:**
- Microsoft Windows 95 OSR2, Pre-Installed with CD & Manual

**\$2499.00**

**add Microsoft Word 97 & Microsoft Publisher 97 for \$129!**

### Faronics Performer Plus System

#### Faronics 5233MMX32

- PA-2007 1MB Cache MMX Motherboard
- Intel Pentium 233 MHz MMX CPU
- 4.3GB Maxtor Ultra IDE Hard Drive
- 32MB EDO RAM
- 24X CD-ROM Drive, 32Bit
- 1.44MB Floppy Drive
- Diamond Stealth 3D 4MB Video Card
- U.S. Robotics 33.6 Data Fax Modem PnP
- 3D Surround Sound Card
- Labtec LCS-1224 Speakers
- Enhanced Windows 95 Keyboard
- Microsoft Intelli-Mouse with Mouse Pad
- Flash Rom Bios
- Ultra DMA IDE Controller, Mode 4
- 2 High Speed Serial Ports
- Enhanced Parallel Port
- Faronics Mid-Tower Case, CSA Approved Power Supply
- INCLUDES:**
- 17" KTX SVGA Monitor, NI, Low Rad, OSD, 28dpi
- ALSO INCLUDES:**
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### Faronics Dream Machine

#### Faronics Platinum Workstation PII5233MMX64SD

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- 7.0GB Matrox Ultra IDE Hard Drive
- 64MB SDRAM - 10ns
- 1.44MB Floppy Drive
- 24X CD-ROM Drive, 32Bit
- Diamond Stealth 3D 4MB Video Card
- Motorola 56K Data Fax Modem PnP
- 3D Surround Sound Card
- Labtec LCS-1224 Speakers
- Enhanced Windows 95 Keyboard PS/2
- Microsoft Intelli-Mouse PS/2 with Mouse Pad
- Flash Rom Bios
- Ultra DMA IDE Controller, Mode 4
- 2 High Speed Serial Ports; Two USB Ports
- Enhanced Parallel Port
- Faronics ATX Pentium II Case, CSA Approved Power Supply
- INCLUDES:**
- 17" KTX SVGA Monitor, NI, Low Rad, OSD, 26dpi
- ALSO INCLUDES:**
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- Gravis Multiplayer Game System
- Norton Anti-Virus

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- Plug and play connection to any standard PC game port
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**PA-2007 1MB Cache \$145**

"With a 200 Mhz CPU, this board reaches a performance as high as other boards with 512KB cache and a 233Mhz Processor...It is currently the Fastest Socket -7 Board on the market."

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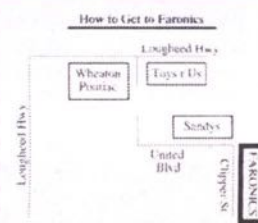
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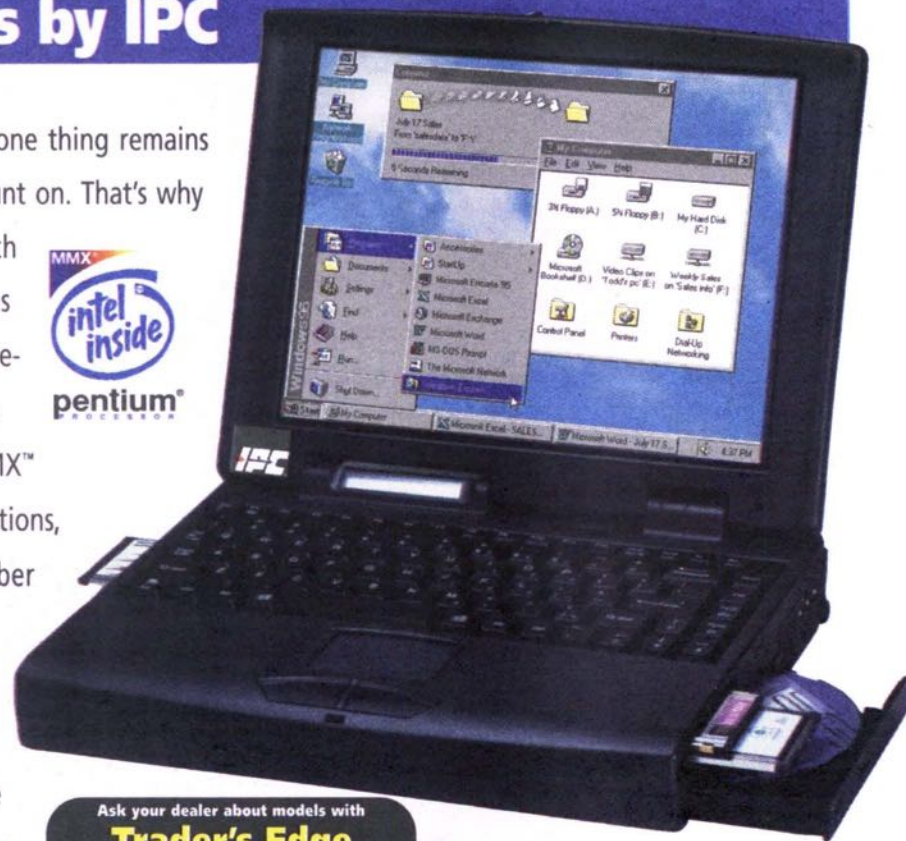
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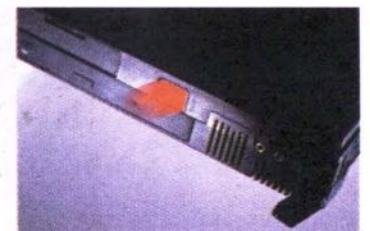
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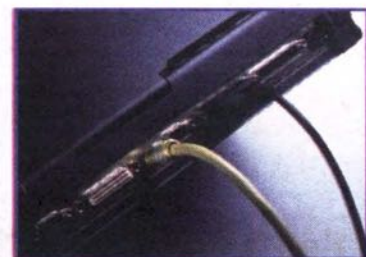


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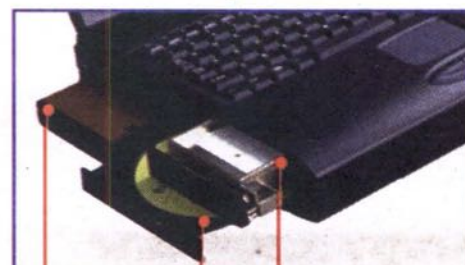
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